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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

DATE: May 5, 2021

SUBJECT: GEOSPATIAL MONITORING OF AIR POLLUTION REPORT FOR NEW
INDY CONTAINERBOARD – CATAWBA, SC

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**DATES OF FIELD
MONITORING:** April 24-27, 2021

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BACKGROUND:

On April 24-27, 2021, U.S. Environmental Protection Agency Region 5 (EPA R5) deployed the Geospatial Monitoring of Air Pollutants (GMAP) mobile monitoring platform. The GMAP measured hydrogen sulfide (H₂S) near New Indy Containerboard.

On April 24, EPA R5 arrived in Catawba, SC and conducted quality control (QC) checks of the GMAP mobile monitoring platform. After all QC checks passed, EPA R5 monitored air quality around New Indy Containerboard and in surrounding communities. EPA R5 continued to monitor on April 25 and performed QC checks that passed that evening. On April 26 and April 27, EPA R5 met with EPA R4 air and water inspectors and monitored on the property of New Indy Containerboard (Figures 66-88, 127-144) in addition to the surrounding community. On April 27, EPA R5 concluded the monitoring after performing QC checks that passed. Additional QC checks were conducted at the end of the sampling day on April 24; these checks passed. The supporting documentation from this campaign has been reviewed and the data validated according to the most recent Quality Assurance Project Plan (QAPP) and Standard Operating Procedure (SOP). Calibration data from this campaign can be found in APPENDIX I.

In all, EPA R5 conducted:

- 64 GMAP mobile transects around New Indy Containerboard, including the Lancaster wastewater treatment plant (WWTP), Waxhaw WWTP, Catawba Reservation, Indian Land, Van Wyck, Riverchase Estates, and other surrounding communities;
- 22 GMAP mobile transects on the New Indy Containerboard facility property;
- 12 GMAP stationary measurements around New Indy Containerboard, including on the Catawba Reservation, Catawba River Water Plant, and surrounding communities of Riverchase Estates and Indian Land; and
- 3 GMAP stationary measurements on the New Indy Containerboard facility property.

METHODS:

Region 5's GMAP uses a Picarro G2204 cavity ringdown spectroscopy analyzer (SN 2267-BFADS2013) to measure H₂S. The collected data are integrated with global positioning system (GPS) location information and meteorological parameters, when available, under a common time stamp using the specially designed Mobile Emission Monitoring software to quantify air pollutant concentrations and source trajectories. Additional information can be found in the GMAP SOP (R5-ARD-0002-r5) and GMAP QAPP (V4.0 2017-05-30).

The figures below were created in Google Earth, a geospatial mapping application, and R, an open-source programming language for statistical computing. Ribbons corresponding to each mobile transect represent concentrations that are geospatially overlaid on a Google Earth satellite image, illustrating the magnitude of the air pollutants measured during the transect. The colors on these ribbons indicate the magnitude of concentrations within the individual transect, and do not correspond to any benchmarks or levels of concern. The time-series located under each corresponding ribbon visual depiction demonstrate measured

concentrations over individual transects. Figures were included for transects with measured concentrations above a threshold value.

Wind speed (WS) and wind direction (WD) are represented by white arrows. The direction of the arrow and length of the bar corresponds to WD and WS, respectively. The longer the wind bar, the greater the WS. Graphics that do not depict wind bars indicate that the GMAP vehicle was moving at a speed too fast for an accurate WS or WD measurement. Obstructions such as tree lines can also impact air flow, resulting in WS/WD measurements that may not be representative of the broader WS/WD in the vicinity of monitoring.

Stationary measurements allow for several additional analyses. The bivariate polar plot is a function in the R open-air statistical package that plots concentration in polar coordinates by WS and WD. In these plots, the weighted mean of a pollutant concentration (measured by the GMAP during stationary collection) multiplied by the frequency of occurrence identifies the WD and WS conditions that dominate the overall mean and provides an indication of the direction of the source(s) of emissions measured by the GMAP. These plots are overlaid on a Google Earth satellite image, with the coordinate origin centered on the GPS coordinates recorded during each stationary measurement data collection. The resulting graphics, where available, provide a visual indication of source attribution and identification.

RESULTS:

Concentrations above the detection limit were measured for H₂S during this campaign.

All concentrations were compared to threshold values, including the Agency for Toxic Substances and Disease Registry's (ATSDR) Minimal Risk Levels (MRL¹). Tables 1-5 depict the maximum one-second measured concentration for each transect or stationary measurement, instrument minimum detection limit (MDL), and ATSDR MRL for each parameter. The figures associated with each data file are listed in Tables 1-5. Rolling 10-minute and 30-minute averages were calculated for a stationary measurement where sustained high concentrations of H₂S were observed.

Following the general findings, the results are presented by day. Each monitored day contains a table of monitoring data files with maximum values presented for each file. An '*' before the monitoring data file name denotes the files which have time-series, ribbon, and/or polar plots included.

¹ MRLs are intended to serve as a screening tool to help public health professionals decide where to look at a pollutant more closely. To be protective and conservative, ATSDR sets MRLs below levels that, based on current information, may cause adverse health effects. Exposure to a level above the MRL does not mean that adverse health effects will occur. Rather, it indicates the need to investigate the situation more closely.
<https://www.atsdr.cdc.gov/toxprofiles/tp114.pdf>

GENERAL FINDINGS:

New Indy Containerboard surrounding area mobile transects:

EPA measured H₂S on-site and outside the fenceline of New Indy Containerboard.

- Highway 5 approximately 0.38 mi north of aeration stabilization basin (Figures 2-15, 91-102, 16, 124):
 - Consistent elevated concentrations were measured over several transects over several days, concentrations of H₂S reached 477.47 ppb
 - 210424_MA03 – 210424_MA07, 210424_MA10 - 210424_MA12
 - 210427_MA01 – 210427_MA06
 - 210424_ST01, 210427_ST01
- Riverchase Estates approximately 1.5 mi SE of New Indy (Figures 17-18, 25-26, 33-42, 50-59, 19-24, 43-49):
 - Consistent elevated concentrations were measured over several transects over several days, both in the community and on the main road next to the community; concentrations of H₂S reached 788.86 ppb
 - On Riverside Rd: 210425_MA04, 210425_MA07, 210426_MA01-210426_MA05, 210426_MA09-210426_MA12
 - In Riverchase Estates: 210425_MA05 – 210425_MA06, 210426_MA06-210426_MA08
- Catawba Reservation approximately 4 mi N of New Indy (Figures 103-113, 101-102, 114-115):
 - Consistent elevated concentrations were measured over several transects, both on the Reservation and on the main road next to the Reservation; concentrations of H₂S reached 124.52 ppb
 - On the Reservation: 210427_MA09-210427_MA12
 - On Reservation Rd on border of Reservation: 210427_MA06, 210427_MA13
- Indian Land approximately 11 mi NE of New Indy (Figures 116-123):
 - Consistent elevated concentrations were measured over several transects; concentrations of H₂S reached 48.45 ppb
 - 210427_MA17-210427_MA21
- On-site of New Indy Containerboard (Figures 66-88, 127-144)
 - Consistent elevated concentrations were measured over several transects over several days on-site; concentrations of H₂S reached 8,545.78 ppb
 - 210426_MA02-210426_MA10, 210427_MA02-210427_MA10

Additional measurements were taken at

- Waxhaw WWTP, 10.46 mi NE of New Indy
 - 210427_MA23; the highest concentration of H₂S was 10.46 ppb which was near the MDL of the instrument
- Lancaster WWTP, 9.58 mi S of New Indy (Figures 52-57)
 - 210426_MA10 – 210426_MA11; the highest concentration of H₂S was 9.88 ppb which was near the MDL of the instrument

The GMAP took measurements near addresses identified in real-time complaints. Consistent with Agency policy on personally identifiable information, EPA will not identify the addresses of private individuals in this report.

- Residence A, > 11 mi NE of New Indy (Figures 122-123):
 - 210427_MA21; the highest concentration of H₂S was 33.11 ppb
- Residence B, >11 mi NE of New Indy (Figures 120-121):
 - 210427_MA20; the highest concentration of H₂S was 40.30 ppb
- Residence C, > 10 mi NE of New Indy (Figures 118-119):
 - 210427_MA18; the highest concentration of H₂S was 43.64 ppb
- Residence D, 9 mi NE of New Indy (Figures 116-117):
 - 210427_MA17; the highest concentration of H₂S was 33.62 ppb

New Indy Containerboard and surrounding area stationary measurement:

EPA measured H₂S on-site and outside the fenceline of New Indy Containerboard.

- Highway 5 approximately 0.38 mi north of aeration stabilization basin:
 - **210424_ST01** (Figure 16): HWY 5 ~0.38 mi N of aeration stabilization basin:
 - 60-minute stationary measurement downwind of New Indy Containerboard
 - (34.85492, -80.87669) HWY 5 between Cureton Ferry Rd & Catawba River
 - maximum 1-second measured H₂S concentration: 473.37 ppb
 - average H₂S concentration over 60 minutes: 281.13 ppb
 - **210427_ST01** (Figure 124): HWY 5 ~0.40 mi N of aeration stabilization basin:
 - 30-minute stationary measurement downwind of New Indy Containerboard
 - HWY 5 between Cureton Ferry Rd & Catawba River
 - maximum 1-second measured H₂S concentration: 501.82 ppb
 - average H₂S concentration over 30 minutes: 315.19 ppb

- Riverchase Estates approximately 1.5 mi SE of New Indy:
 - **210425_ST01** (Figures 29-30): ~1.61 mi NE of New Indy
 - 30-minute stationary measurement downwind of New Indy Containerboard
 - Cobble Stone Way & Sherman Drive; Riverchase Estates
 - maximum 1-second measured H₂S concentration: 102.63 ppb
 - average H₂S concentration over 30 minutes: 65.85 ppb
 - **210426_ST01** (Figures 60-61): ~0.64 mi SE of New Indy
 - 60-minute stationary measurement downwind of New Indy Containerboard
 - Riverside Rd & Confab Ln
 - maximum 1-second measured H₂S concentration: 934.74 ppb
 - average H₂S concentration over 60 minutes: 669.44 ppb
 - maximum 10-minute rolling average: 858.06 ppb
 - maximum 30-minute rolling average: 732.32 ppb
 - **210426_ST02** (Figures 62-63): ~1.53 mi SE of New Indy
 - 30-minute stationary measurement downwind of New Indy Containerboard
 - Riverside Rd; Entrance to Riverchase Estates
 - maximum 1-second measured H₂S concentration: 219.20 ppb
 - average H₂S concentration over 30 minutes: 187.90 ppb
 - **210426_ST03** (Figures 64-65): ~1.64 mi SE of New Indy
 - 30-minute stationary measurement downwind of New Indy Containerboard
 - Riverside Rd; Entrance to Riverchase Estates
 - maximum 1-second measured H₂S concentration: 193.11 ppb
 - average H₂S concentration over 30 minutes: 110.19 ppb
- Catawba Reservation ~3.56 mi N of New Indy:
 - **210427_ST02** (Figures 125-126):
 - 30-minute stationary measurement downwind of New Indy Containerboard
 - Iswa Headstart – 1540 Tom Steven Rd
 - maximum 1-second measured H₂S concentration: 140.56 ppb
 - average H₂S concentration over 30 minutes: 120.75 ppb

- On-site at New Indy Containerboard:
 - **210427_ST01** (Figures 145-146):
 - 38-minute stationary measurement – NE perimeter of aeration stabilization basin
 - maximum 1-second measured H₂S concentration: 3592.60 ppb
 - average H₂S concentration over 30 minutes: 842.01 ppb
 - **210427_ST02** (Figures 147-148):
 - 5-minute stationary measurement – NE perimeter of aeration stabilization basin
 - maximum 1-second measured H₂S concentration: 3155.78 ppb
 - average H₂S concentration over 30 minutes: 975.87 ppb



Figure 1: Nomenclature of New Indy Paperboard facility used in this report

The following nomenclature will be used when referencing areas on New Indy Containerboard:

1. #2 holding pond
2. Sludge pond
3. Aeration stabilization basin
4. Equilibration basin

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File Name	Max 1-sec H ₂ S (ppb)	Location (approximate)	Distance from max value (approximate)	Figure
NIC: New Indy Containerboard ASB: Aeration Stabilization Basin HWY 5: Highway 5 HP: #2 Holding Pond SP: Sludge Pond				
210424_MA01	8.76	Hwy 5 (Reservation Rd) to Riverlane Rd	1 mi N NIC	-
210424_MA02	23.82	HWY 5 & Cureton Ferry Rd	0.44 mi N NIC	-
210424_MA03	168.85	HWY 5	0.38 mi N NIC	2-3
210424_MA04	110.99	HWY 5	0.38 mi N NIC	-
210424_MA05	389.55	HWY 5	0.38 mi N NIC	4-5
210424_MA06	291.13	HWY 5	0.38 mi N NIC	-
210424_MA07	365.78	HWY 5	0.38 mi N NIC	6-7
210424_MA08	12.11	HWY 5 (Catawba River) to Steel Hill Rd	0.84 mi NE ASB	-
210424_MA09	14.10	HWY 5 W of Riverside Rd	1.21 mi E ASB	-
210424_MA10	320.81	HWY 5	0.34 mi N ASB	8-9
210424_MA11	390.83	HWY 5	0.38 mi N NIC	10-12
210424_MA12	346.38	HWY 5	0.38 mi N NIC	13-15
210424_MA13	15.96	HWY 5 (Cureton Ferry Rd) N to E. Springdale Rd	1.58 mi NE of NIC	-
210425_MA01	19.72	Lesslie Hwy – US 77 to Joanna Ln	6.0 mi NW NIC	-
210425_MA02	14.38	HWY 5 (S Anderson Rd) to Cureton Ferry Rd	3.1 mi NW of NIC	-
210425_MA03	63.29	Cureton Ferry Rd to HWY 5 to Riverside Rd	0.64 mi SE of HP	-
210425_MA04	288.01	Riverside Rd (Royalgate Rd) to Porter Ranch Rd; Riverchase Estates	0.7 mi SE of HP	17-18
210425_MA05	175.56	Riverside Rd to Cobblestone Way to Sherman Drive; Riverchase Estates	1.5 mi SE of HP	19-21
210425_MA06	122.21	Cobblestone Way to Sherman Drive; Riverchase Estates	1.49 mi SE HP	22-24
210425_MA07	88.16	Cobblestone Way to Riverside Rd to HWY 5 to Cureton Ferry Rd	0.59 mi SE SP	25-26
210425_MA08	13.44	Riverside Rd to HWY 5 (Cureton Ferry Rd)	0.44 mi NE ASB	-
210425_MA09	35.48	Riverside Rd to Cobblestone Way	0.88 mi SE HP	-
210425_MA10	74.07	Cobblestone Way to HWY 5 to Cureton Ferry Rd	0.70 mi SE HP	27-28
210425_MA11	40.90	Cureton Ferry Rd to HWY 5	0.30 mi N NIC	-
210425_MA12	9.68	HWY 5 (Cureton Ferry Rd) to Riverside Rd (Cobblestone Way)	0.68 mi SE SP	-
210425_MA13	14.32	Riverside Rd (Porter Ranch Rd) to Quail Point Farm Rd	0.58 mi SE SP	-

Table 1: H₂S max 1-sec mobile concentration and location of transects April 24 and April 25, 2021

ENFORCEMENT CONFIDENTIAL

File Name	Max 1-sec H ₂ S (ppb)	Location (approximate)	Distance from max value (approximate)	Figure
NIC: New Indy Containerboard ASB: Aeration Stabilization Basin HWY 5: Highway 5 HP: #2 Holding Pond SP: Sludge Pond				
210426_MA01	777.78	Riverside Rd (HWY 5) to Porter Ranch Rd; Riverchase Estates	0.73 mi SE HP	33-34
210426_MA02	788.76	Riverside Rd (Luman Rd) to HWY 5; Riverchase Estates	0.70 mi SE HP	35-36
210426_MA03	516.70	Riverside Rd (Springdell Ln) to Porter Ranch Rd; Riverchase Estates	0.70 mi SE HP	37-38
210426_MA04	807.60	Riverside Rd (Porter Ranch Rd) to HWY 5 to Cureton Ferry Rd; Riverchase Estates	0.7 mi E SP	39-40
210426_MA05	691.11	Cureton Ferry Rd to HWY 5 to Riverside Rd (Porter Ranch Rd); Riverchase Estates	0.61 mi SE SP	41-42
210426_MA06	194.25	Cobblestone Way to Sherman Drive to Townsend Rd; inside Riverchase Estates	1.55 mi SE HP	43-44
210426_MA07	98.34	Townsend Rd; inside Riverchase Estates	1.56 mi S HP	45-47
210426_MA08	305.13	Cobblestone Way to Sherman Drive to Townsend Rd; inside Riverchase Estates	1.51 mi SE HP	48-49
210426_MA09	179.49	Riverside Rd/W Meeting St (Cobblestone) to Plantation Rd; Riverchase Estates	1.62 mi SE HP	50-51
210426_MA10	9.88	W Meeting St to Lancaster WWTP facility	9.58 mi S NIC	52-54
210426_MA11	9.77	Lockwood Ln/ Lancaster WWTP to W Meeting St (Old Landsford Rd)	9.75 mi S NIC	55-57
210426_MA12	281.25	Riverside Rd (Lancaster Bypass E) to HWY 5 to Cureton Ferry Rd; Riverchase Estates	1.0 mi S ASB	58-59
ON-SITE – NEW INDY:				
210426_MA01	17.97	HWY 5 to Cureton Ferry Rd to NIC Parking Lot		-
210426_MA02	129.42	Cureton Ferry Rd through NIC, N HP, W SP, W ASB		66-68
210426_MA03	1992.50	Perimeter W to N Aeration Stabilization Basin		69-71
210426_MA04	8545.78	Perimeter N to E Aeration Stabilization Basin		72-74
210426_MA05	741.22	Perimeter E to S to W Aeration Stabilization Basin		75-77
210426_MA06	191.68	Perimeter W ASB to E SP to S HP to W HP		78-79
210426_MA07	228.00	Perimeter W HP to S HP to E HP		80-81
210426_MA08	5021.28	Perimeter W SP to S ASB to E ASB		82-84
210426_MA09	196.24	Perimeter Aeration Stabilization Basin N to E		85-86
210426_MA10	97.79	W ASB to W SP to N HP through facility		87-88
210426_MA11	17.52	Facility to Cureton Ferry Rd to NIC Parking Lot		-

Table 2: Mobile H₂S max 1-sec mobile concentration and location of transects April 26, 2021

ENFORCEMENT CONFIDENTIAL

File Name	Max 1-sec H2S (ppb)	Location (approximate)	Distance from max value (approximate)	Figure
NIC: New Indy Containerboard ASB: Aeration Stabilization Basin HWY 5: Highway 5 HP: #2 Holding Pond SP: Sludge Pond				
210427_MA01	407.66	HWY 5 (Reservation Rd) to Riverside Rd	0.46 NE ASB	91-92
210427_MA02	79.50	Riverside Rd (HWY 5) to Cobblestone Way	1.41 mi E ASB	93-94
210427_MA03	396.62	Riverside Rd to HWY 5 to Cureton Ferry Rd	0.35 mi N ASB	95-96
210427_MA04	477.47	Cureton Ferry Rd (Crosby Ln) to HWY 5	0.38 mi N ASB	97-98
210427_MA05	453.95	HWY 5 to New Indy Scale House	0.37 NW ASB	99-100
210427_MA06	375.17	New Indy Scale House to HWY 5 to Reservation Rd to Neely Store Rd to Church Rd	3.0 mi N NIC	101-102
210427_MA07	14.39	Rivercrest Rd (Church Rd)	6.0 mi NW NIC	-
210427_MA08	29.96	Rivercrest Rd to Church Rd to Neely Store Rd to Reservation Rd	5.8 mi NW NIC	-
210427_MA09	122.50	Indian Trail from Reservation Rd to Tom Steven Rd; Catawba Reservation	4.0 mi N NIC	103-104
210427_MA10	124.26	Tom Steven Rd (Catawba Cultural Center); Catawba Reservation	3.9 mi N NIC	105-107
210427_MA11	124.52	Tom Steven Rd + Peace Pipe Rd (ISWA Headstart); Catawba Reservation	3.8 mi N NIC	108-110
210427_MA12	108.09	ISWA Headstart to Tom Steven Rd to Indian Trail/Dunn Rd; Catawba Reservation	3.8 mi N NIC	111-113
210427_MA13	407.56	Reservation Rd (G Dunn Rd) to HWY 5 (Steel Hill Rd)	0.42 mi N ASB	114-115
210427_MA14	18.07	Steel Hill Rd (HWY 5) to Van Wyck Rd (Griffin Rd)	2.2 mi NE ASB	-
210427_MA15	18.16	Van Wyck Rd (Calvert Estate Dr) to Charlotte Hwy (SR S29 – 126); Carolina Lakes Golf Club	5.1 mi NE NIC	-
210427_MA16	14.11	Charlotte Hwy and SR S29 - 126	7.3 mi NE NIC	-
210427_MA17	33.62	Charlotte Hwy (SR S29-126) to Ft Mill Hwy; Bridgemill, Beansprout Academy of Indian Land	9 mi NE NIC	116-117
210427_MA18	43.64	Ft. Mill Hwy (Charlotte Hwy) to Ferguson Ln to Priory Ridge Dr; Indian Land	10.4 mi NE NIC	118-119
210427_MA19	48.45	Priory Ridge Drive to Black Ridge Dr to Dartington Dr to SR S29-336 to Silver Run Rd to Yellow Springs Dr to Crandon Rd; Indian Land	10.7 mi NE NIC	-
210427_MA20	40.30	Yellow Springs Dr to Silver Run Rd (SR 29-64); Indian Land	11.4 mi NE NIC	120-121
210427_MA21	33.11	SR 29-64 to Bridgehampton Club Dr to Norwalk Ln to Future Rd; Indian Land	11.64 mi NE NIC	122-123
210427_MA22	31.29	Bridgehampton Club Dr to Ardrey Kell Rd to Marvin Rd to New Town Rd to Waxhaw Marvin Rd (Kensington Dr); Marvin	9.14 mi NE NIC	-
210427_MA23	10.46	Waxhaw Marvin Rd to Kensington Dr; Waxhaw WWTP	9 mi NE NIC	-
210427_MA24	10.90	HWY 5	0.35 N ASB	-

Table 3: H2S max 1-sec mobile concentration and location of community transects April 27, 2021

ENFORCEMENT CONFIDENTIAL

File Name	Max 1-sec H2S (ppb)	Location (approximate)	Distance from max value (approximate)	Figure
NIC: New Indy Containerboard ASB: Aeration Stabilization Basin HWY 5: Highway 5 HP: #2 Holding Pond SP: Sludge Pond				
ON-SITE – NEW INDY:				
210427_MA01	22.62	NIC Parking Lot to Cureton Ferry Rd through NIC to W equalization basin to E pond		-
210427_MA02	326.49	NIC to N HP to W SP to perimeter of ASB		128-129
210427_MA03	317.95	NW SP to S HP		130-131
210427_MA04	645.95	S HP to W SP to perimeter S to NW ASB		132-133
210427_MA05	1015.5	NW to NE perimeter of Aeration Stabilization Basin		134-135
210427_MA06	2170.15	E to SE perimeter of Aeration Stabilization Basin		136-137
210427_MA07	1705.82	SE to NW perimeter of Aeration Stabilization Basin		138-139
210427_MA08	1142.22	NW to NE perimeter of Aeration Stabilization Basin		140-141
210427_MA09	898.48	E to SW perimeter of Aeration Stabilization Basin		142-143
210427_MA10	318.79	S ASB to N HP to NIC facility		144-145
210427_MA11	12.86	NIC Parking Lot to Cureton Perry Rd to NIC Parking		-

Table 4: H2S max 1-sec concentration and location of transects on New Indy facility property April 27, 2021

File Name	Duration	Max 1-sec H2S (ppb)	Average (ppb)	Location (approximate)	Distance from max value (approximate)	Figure
NIC: New Indy Containerboard ASB: Aeration Stabilization Basin HWY 5: Highway 5 HP: #2 Holding Pond SP: Sludge Pond						
210424_ST01	60 min	473.37	281.13	HWY 5 (Cureton Ferry Rd) & Catawba River	0.39 mi N ASB	16
210424_ST02		ND		-		-
210424_ST03	30 min	14.01	3.82	Riverside Rd & Confab Ln	0.67 mi SE HP	-
210425_ST01	62 min	387.41	173.22	Riverside Rd & Confab Ln	0.63 mi NE NIC	29-30
210425_ST02	30 min	102.63	65.85	Cobble Stone Way & Sherman Drive; Riverchase Estates	1.61 mi NE NIC	31-32
210425_ST03	34 min	12.25	2.64	Riverside Rd & Quail Point Farm Rd	0.4 mi SE Catawba River Water Plant	-
210425_ST04	47 min	13.16	1.73	Cureton Ferry Rd	0.4 mi N NIC	-
210426_ST01	60 min	943.74	669.44	Riverside Rd & Confab Ln	0.64 mi SE NIC	60-61
210426_ST02	30 min	219.20	187.90	Riverside Rd; Entrance to Riverchase Estates	1.53 mi SE NIC	62-63
210426_ST03	30 min	193.11	110.19	Townsend Rd; Riverchase Estates	1.64 mi SE NIC	64-65
210427_ST01	30 min	501.82	315.19	HWY 5 (Cureton Ferry Rd) & Catawba River	0.40 mi N ASB	124-125
210427_ST02	30 min	140.56	120.75	Iswa Headstart; Catawba Reservation	3.56 mi N NIC	126-127
ON-SITE:						
210426_ST01	129 min	66.64	6.73	NIC Parking Lot 34.84553, -80.89592		89-90
ON-SITE:						
210427_ST01	38 min	3592.60	842.01	NE perimeter of Aeration Stabilization Basin 34.84785, -80.87591		146-147
210427_ST02	5 min	3155.78	975.87	NE perimeter of Aeration Stabilization Basin 34.84784, -80.87590		148-149

Table 5: H2S max 1-second value and location of stationary measurements April 24, 2021

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Mobile GMAP measurements – April 24, 2021

MOBILE MEASUREMENTS – APRIL 24, 2021	H₂S (PPB)
ATSDR ACUTE (≤14 DAY) MRL	70
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20
ATSDR CHRONIC (≥365 DAYS) MRL	-
GMAP MDL	7.86
	max 1-sec conc
210424_MA01	8.76
210424_MA02	23.82
*210424_MA03	168.85
210424_MA04	110.99
*210424_MA05	389.55
210424_MA06	291.13
*210424_MA07	365.78
210424_MA08	12.11
210424_MA09	14.10
*210424_MA10	320.81
*210424_MA11	390.83
*210424_MA12	346.38
210424_MA13	15.96

Table 6: Maximum one-second concentrations from mobile transects - April 24, 2021

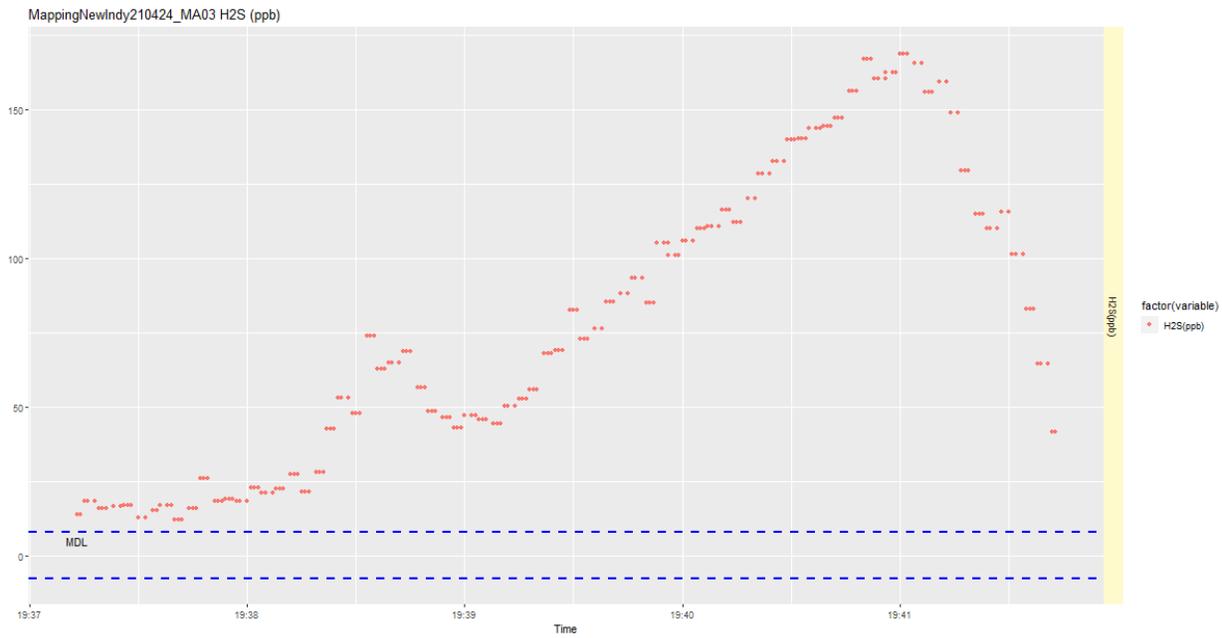


Figure 2: H₂S mobile transect timeseries – 210424MA03

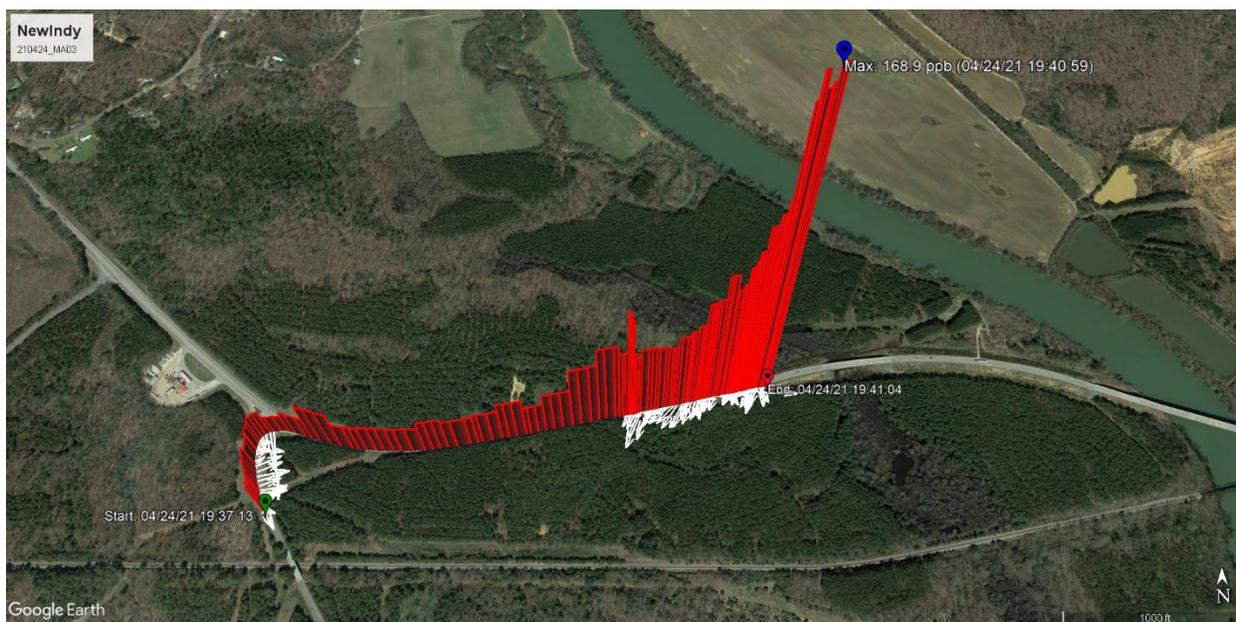


Figure 3: H₂S mobile transect ribbon N of NIC– 210424_MA03

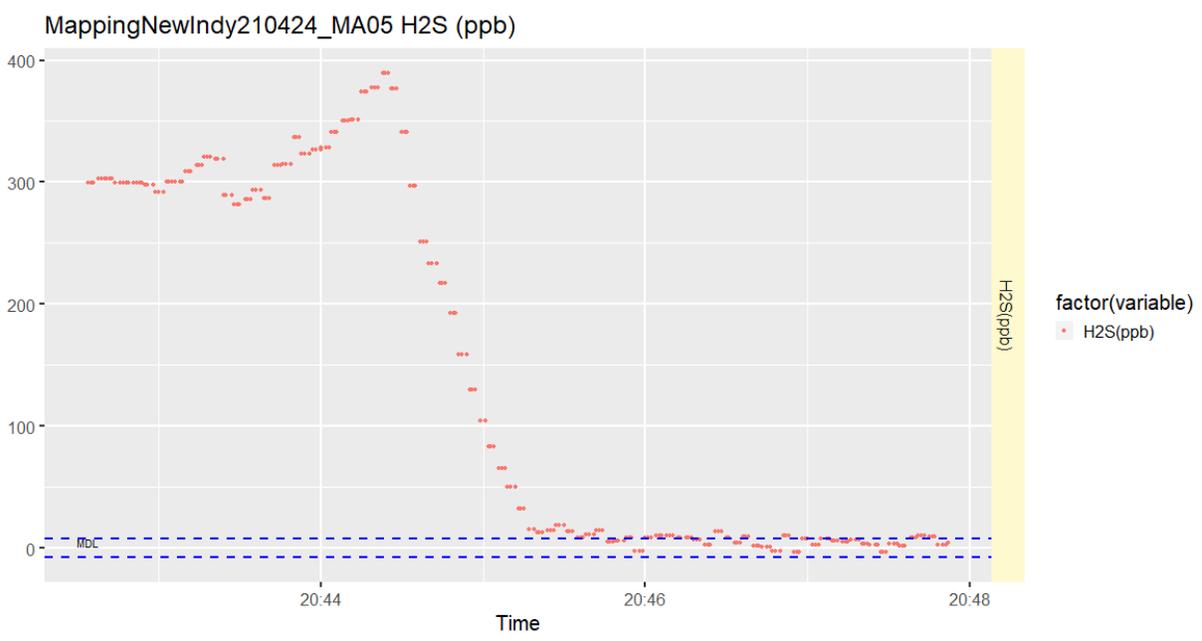


Figure 4: H₂S mobile transect timeseries – 210424MA05

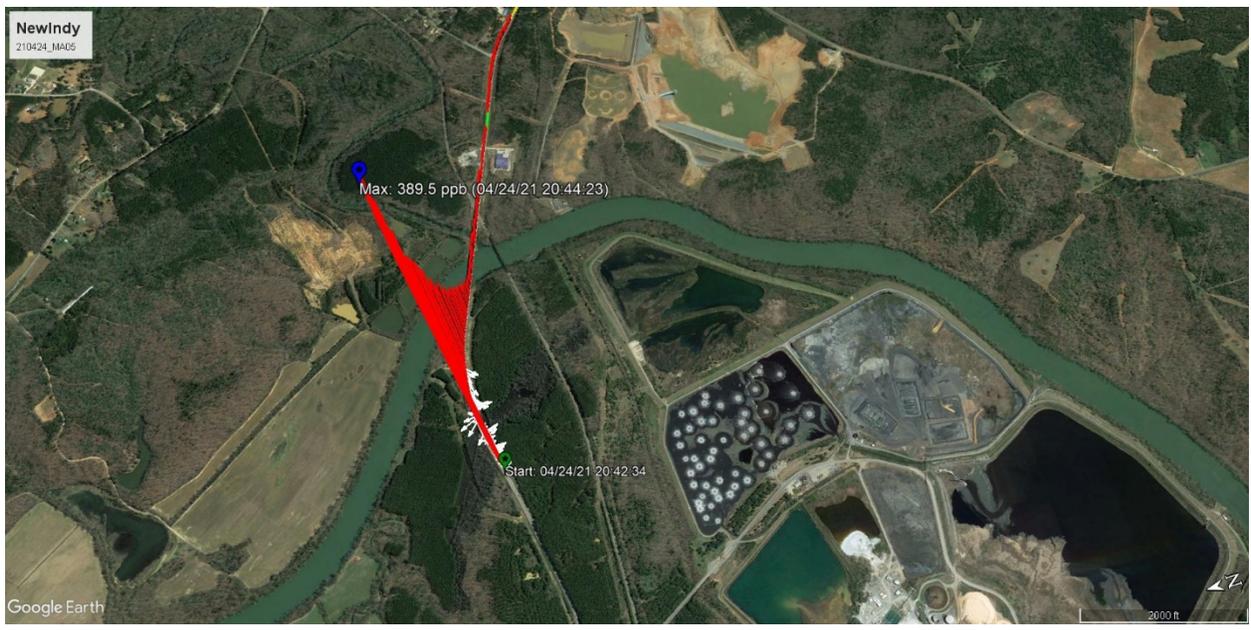


Figure 5: H₂S mobile transect ribbon – 210424_MA05

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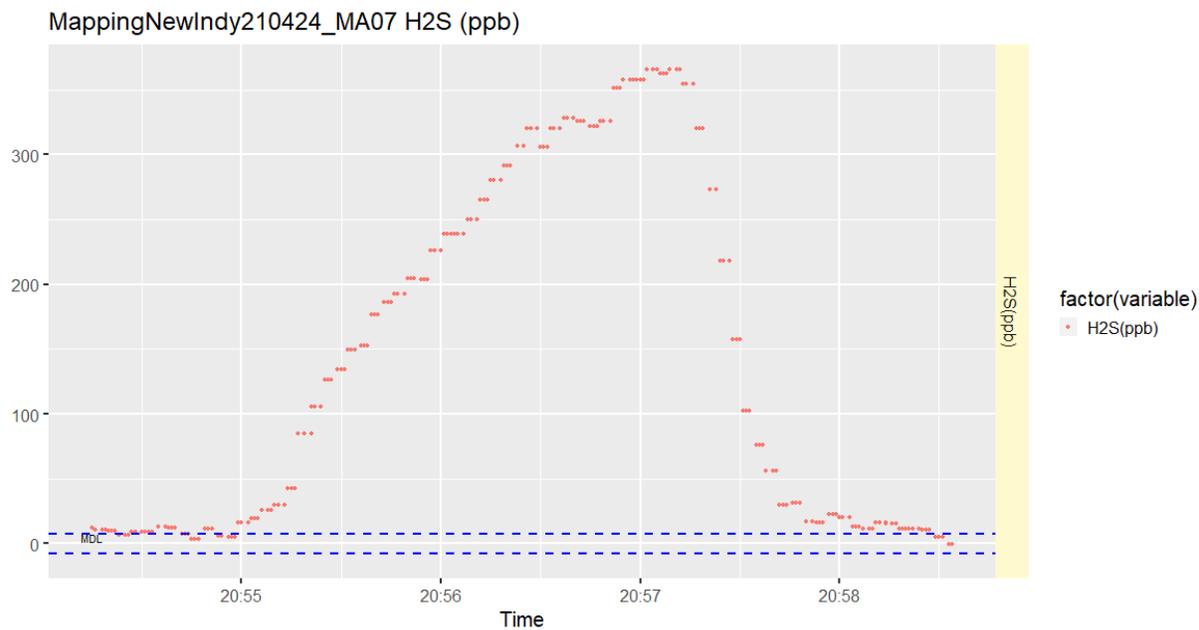


Figure 6: H₂S mobile transect timeseries – 210424MA07

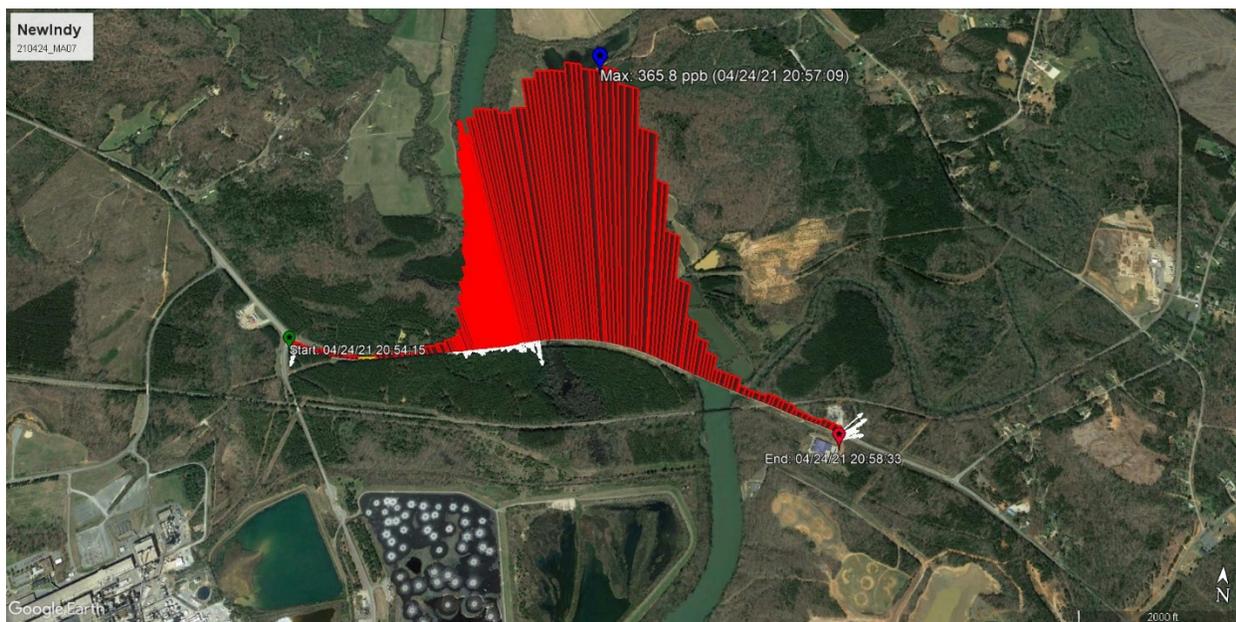


Figure 7: H₂S mobile transect ribbon – 210424_MA07

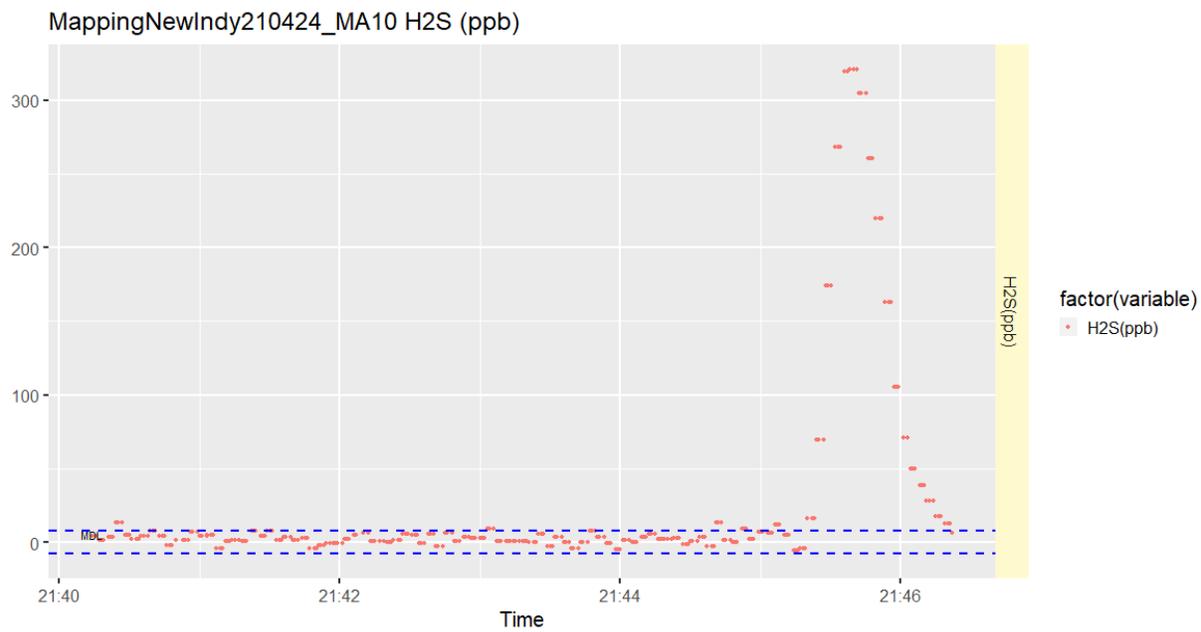


Figure 8: H₂S mobile transect timeseries – 210424MA10

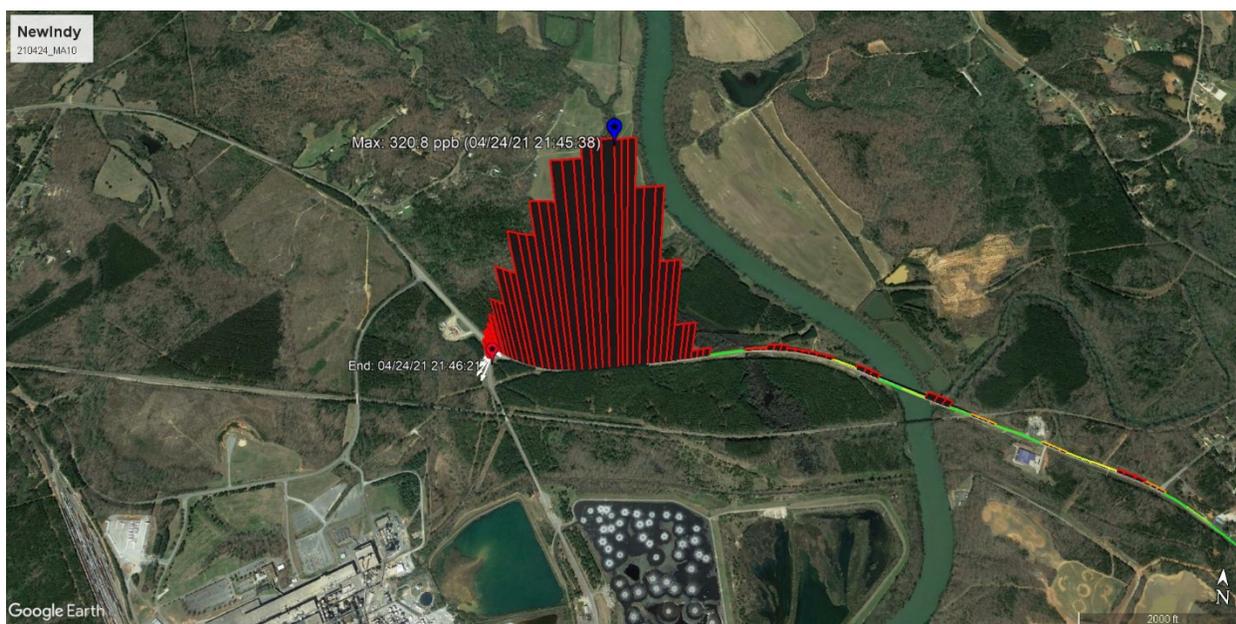


Figure 9: H₂S mobile transect ribbon – 210424_MA10

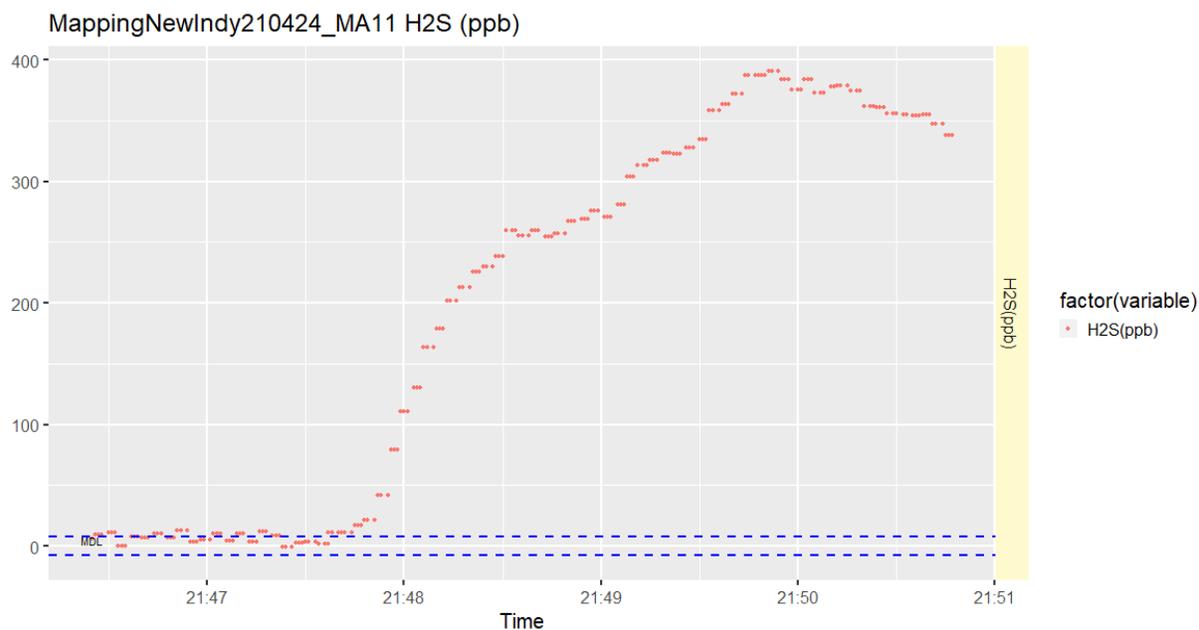


Figure 10: H₂S mobile transect timeseries – 210424MA11



Figure 11: H₂S mobile transect ribbon – 210424_MA11



Figure 12: H₂S mobile transect ribbon HWY 5 N of New Indy – 210424_MA11 (Figure 11 – inset)

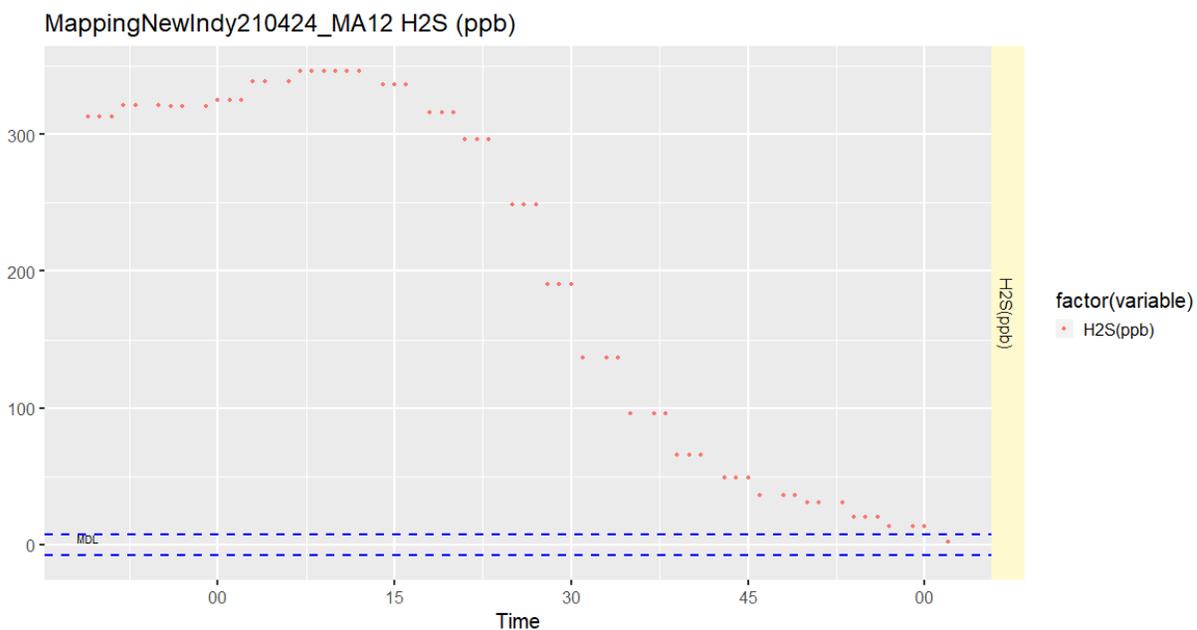


Figure 13: H₂S mobile transect timeseries – 210424MA12

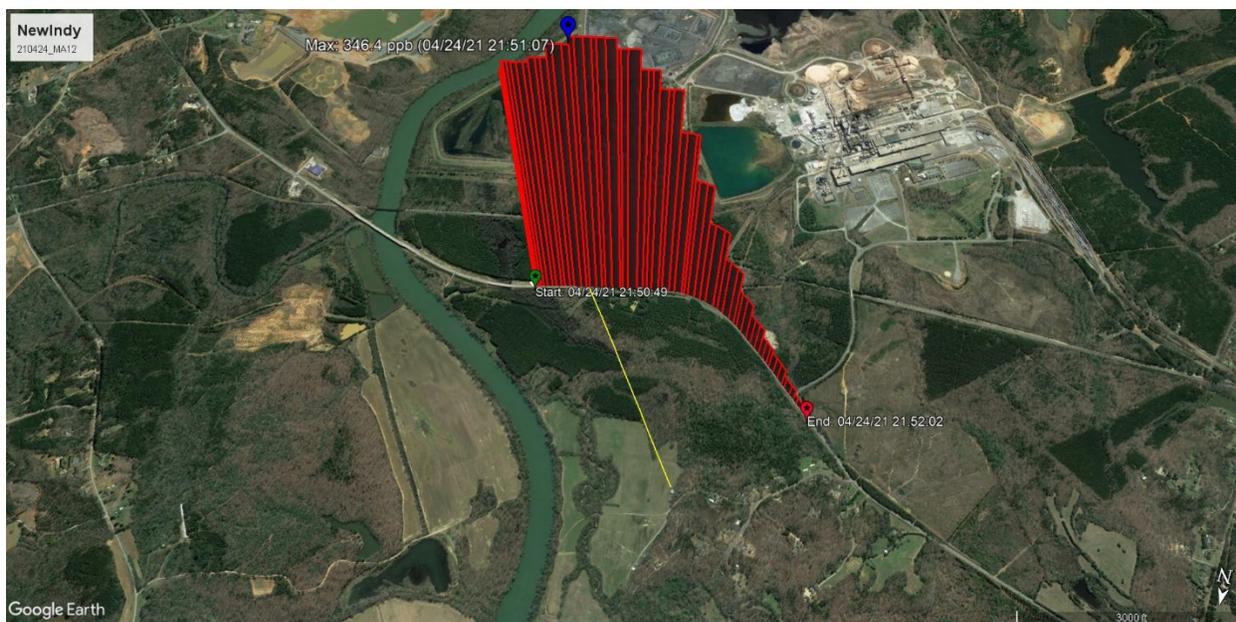


Figure 14: H₂S mobile transect ribbon – 210424_MA12

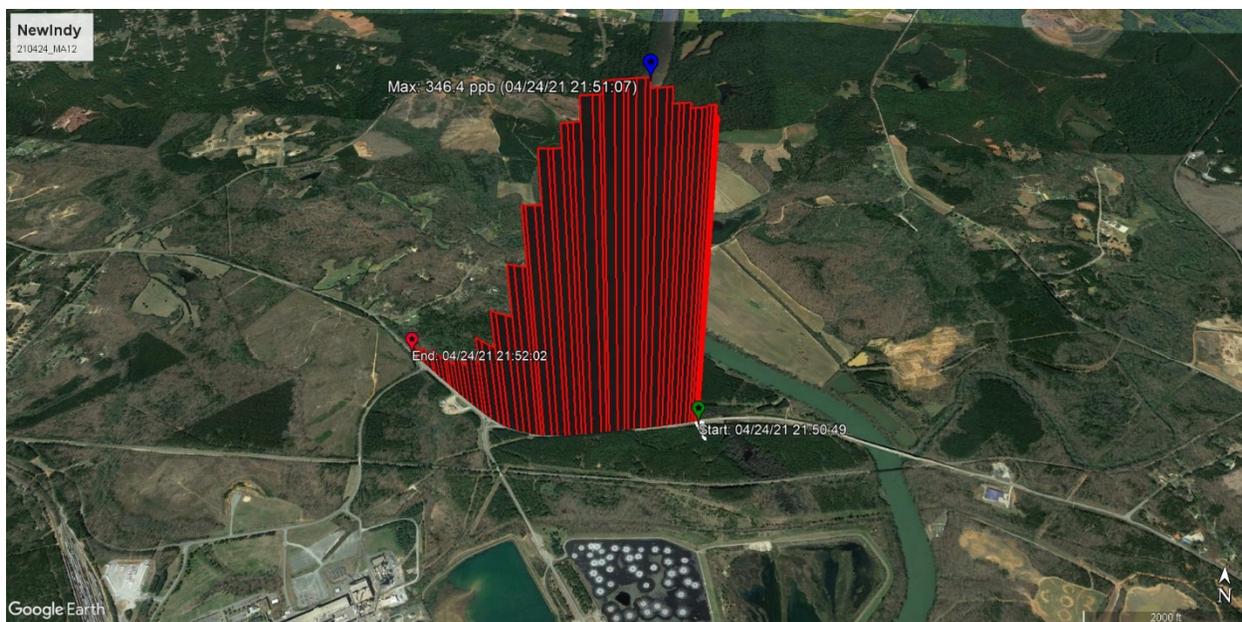


Figure 15: H₂S mobile transect ribbon – 210424_MA12 (same transect as Figure 14, rotated)

Stationary GMAP measurements – April 24, 2021

STATIONARY MEASUREMENTS – APRIL 24, 2021	H ₂ S (PPB)
ATSDR ACUTE (≤ 14 DAY) MRL	70
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20
ATSDR CHRONIC (≥ 365 DAYS) MRL	-
GMAP MDL	7.86
	max 1-sec conc
*210424_ST01	473.37
210424_ST02	-
210424_ST03	14.01

Table 7: Maximum one-second concentrations from stationary measurements - April 24, 2021

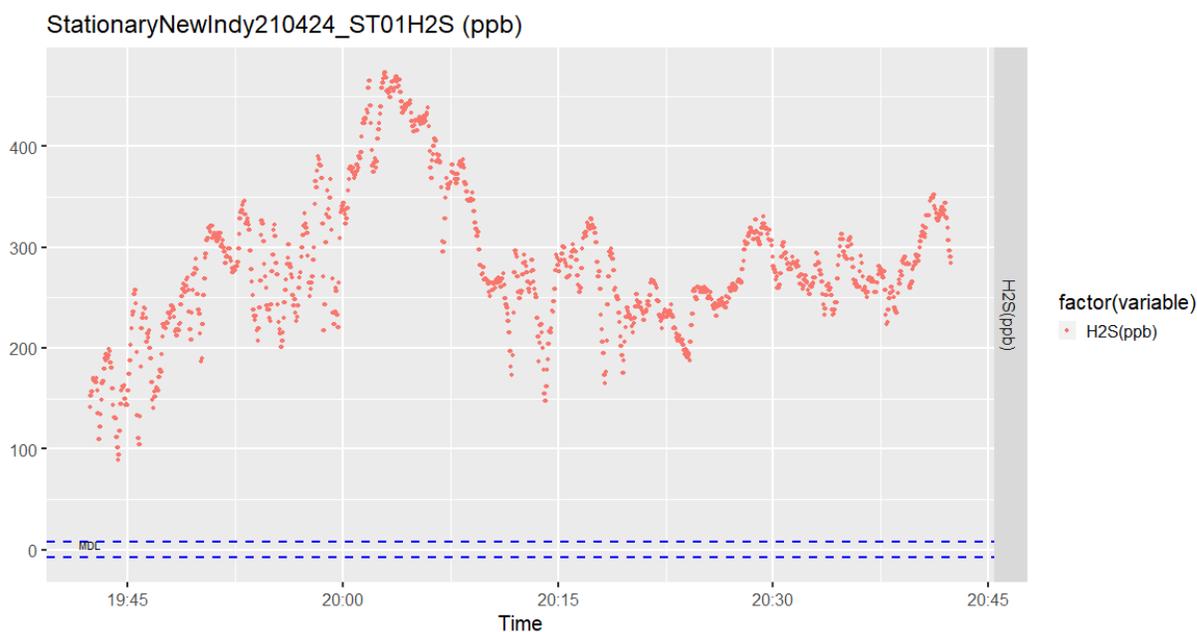


Figure 16: H₂S stationary timeseries– 210424_ST01

***no polar plot due to tree line obstruction of wind data

Mobile GMAP measurements – April 25, 2021

MOBILE MEASUREMENTS - APRIL 25, 2021	H₂S (PPB)
ATSDR ACUTE (≤ 14 DAY) MRL	70
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20
ATSDR CHRONIC (≥ 365 DAYS) MRL	-
GMAP MDL	7.86
	max 1-sec conc
210425_MA01	19.72
210425_MA02	14.38
210425_MA03	63.29
*210425_MA04	288.01
*210425_MA05	175.56
*210425_MA06	122.21
*210425_MA07	88.16
210425_MA08	13.44
210425_MA09	35.48
*210425_MA10	74.07
210425_MA11	20.98
210425_MA12	9.53
210425_MA13	40.90
210425_MA14	9.68
210425_MA15	14.32

Table 8: Maximum one-second concentrations from mobile transects - April 25, 2021

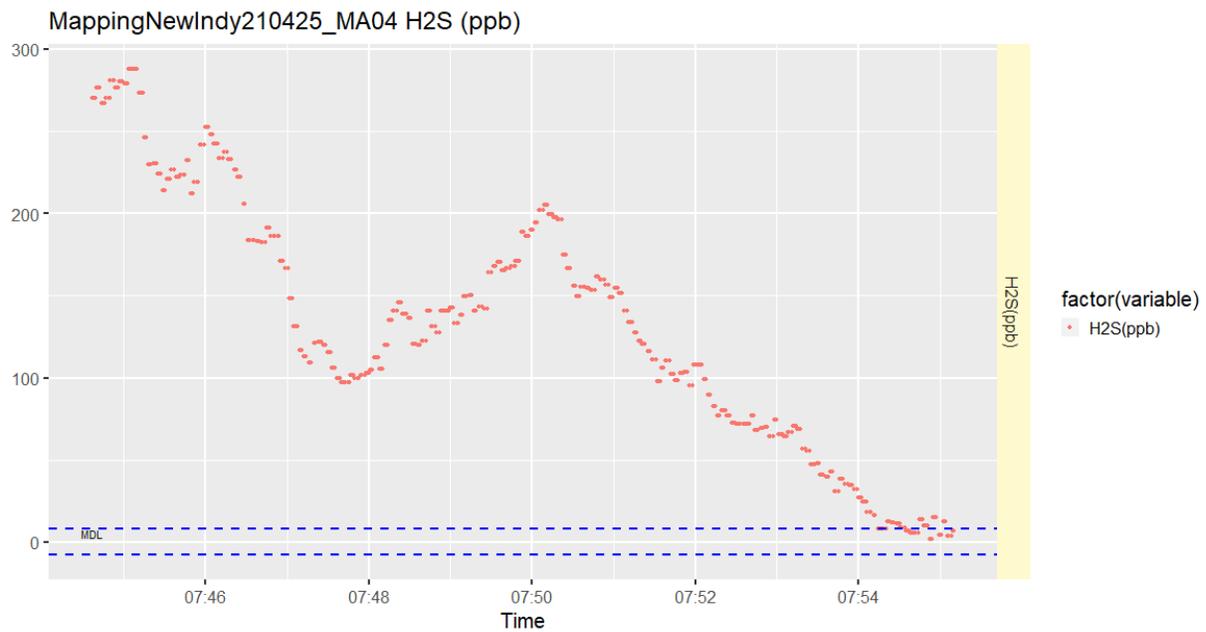


Figure 17: H₂S mobile transect timeseries – 210425MA04

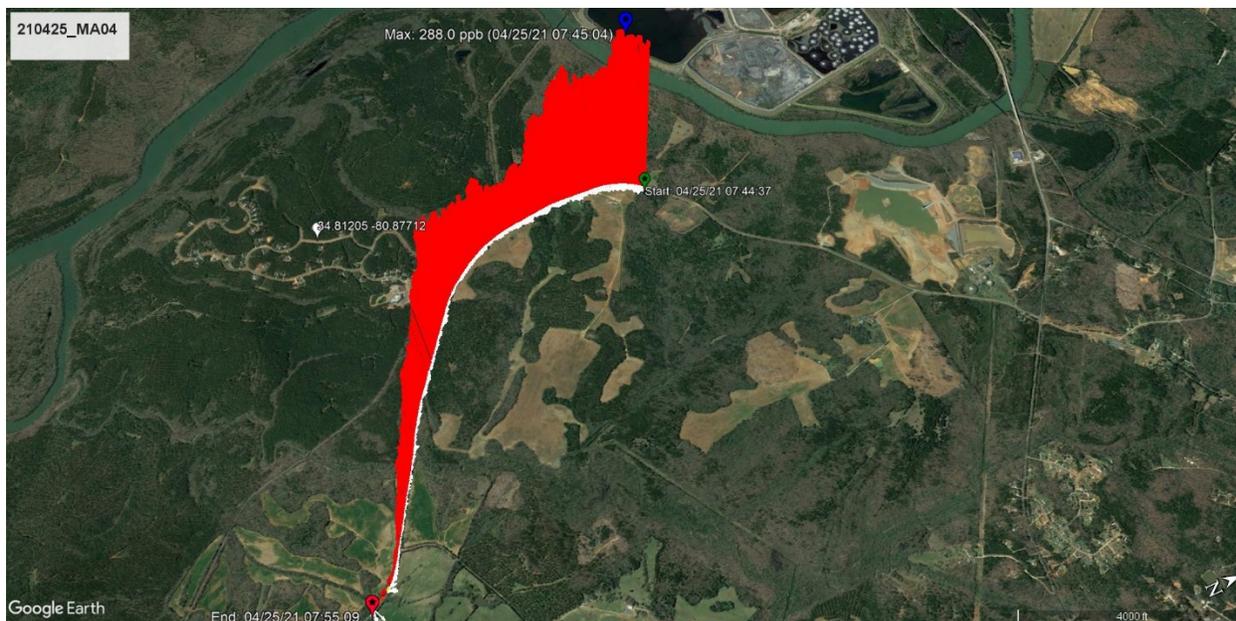


Figure 18: H₂S mobile transect ribbon – 210425_MA04

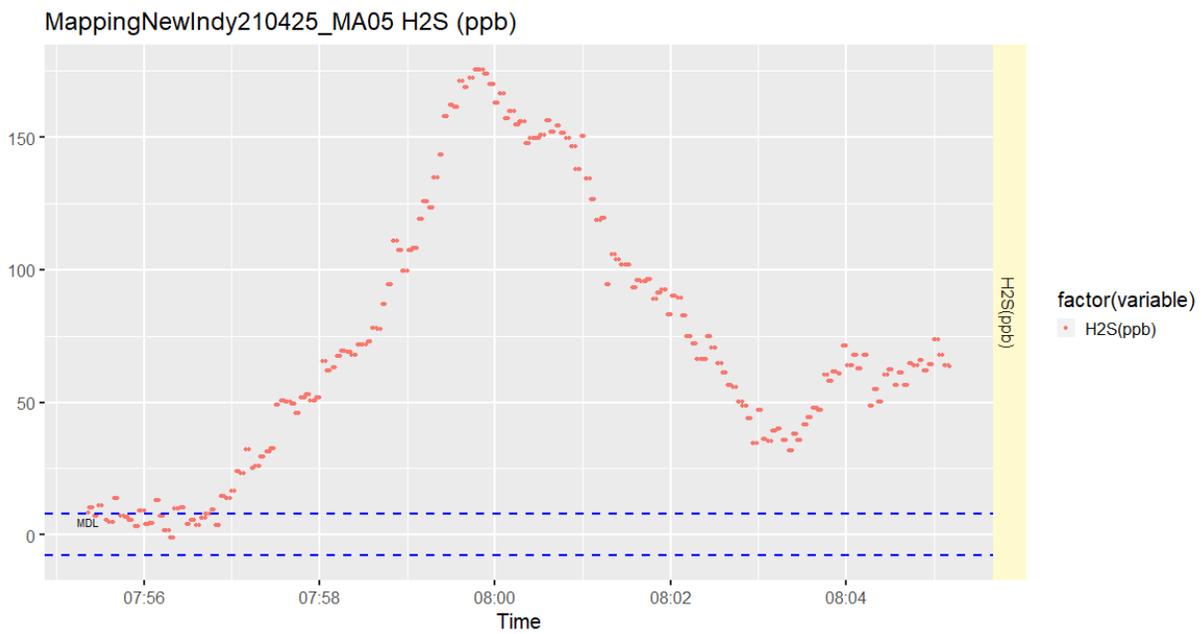


Figure 19: H₂S mobile transect timeseries – 210425MA05

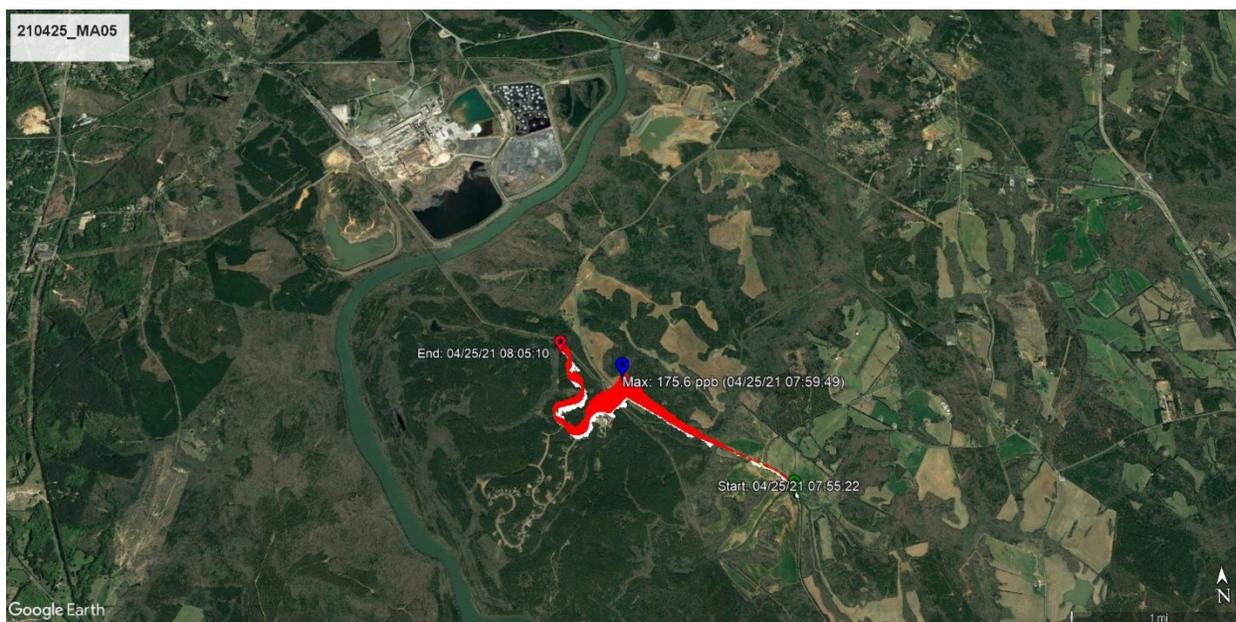


Figure 20: H₂S mobile transect ribbon – 210425_MA05

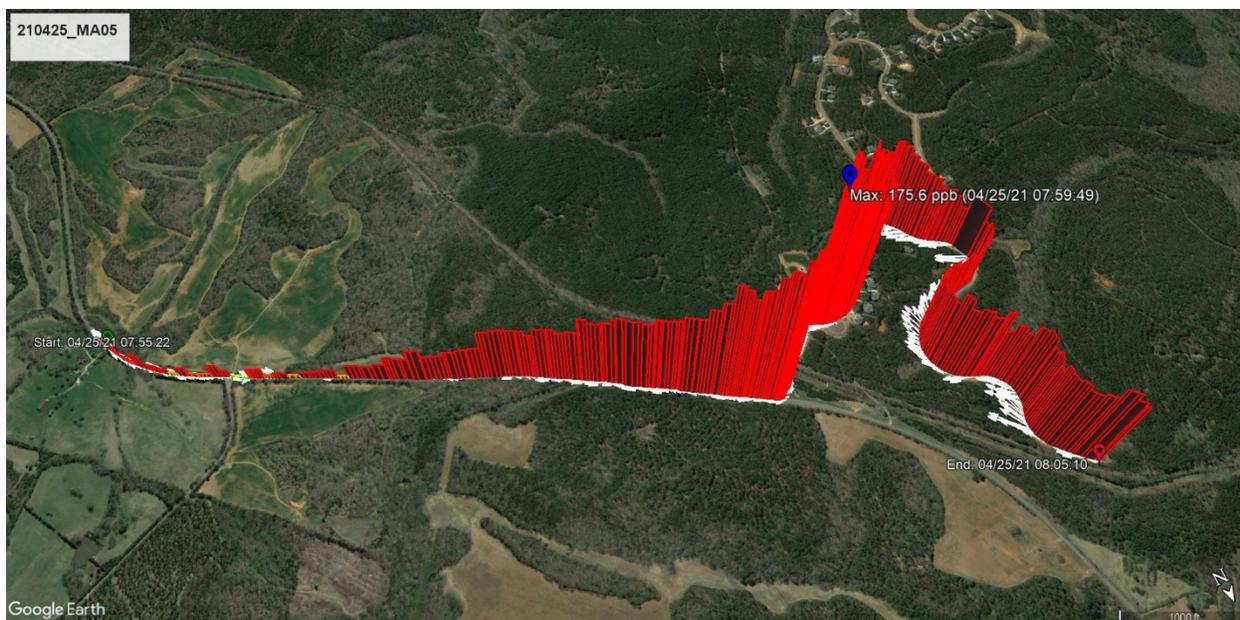


Figure 21: H₂S mobile transect ribbon – 210425_MA05 (same transect as Figure 20, rotated)

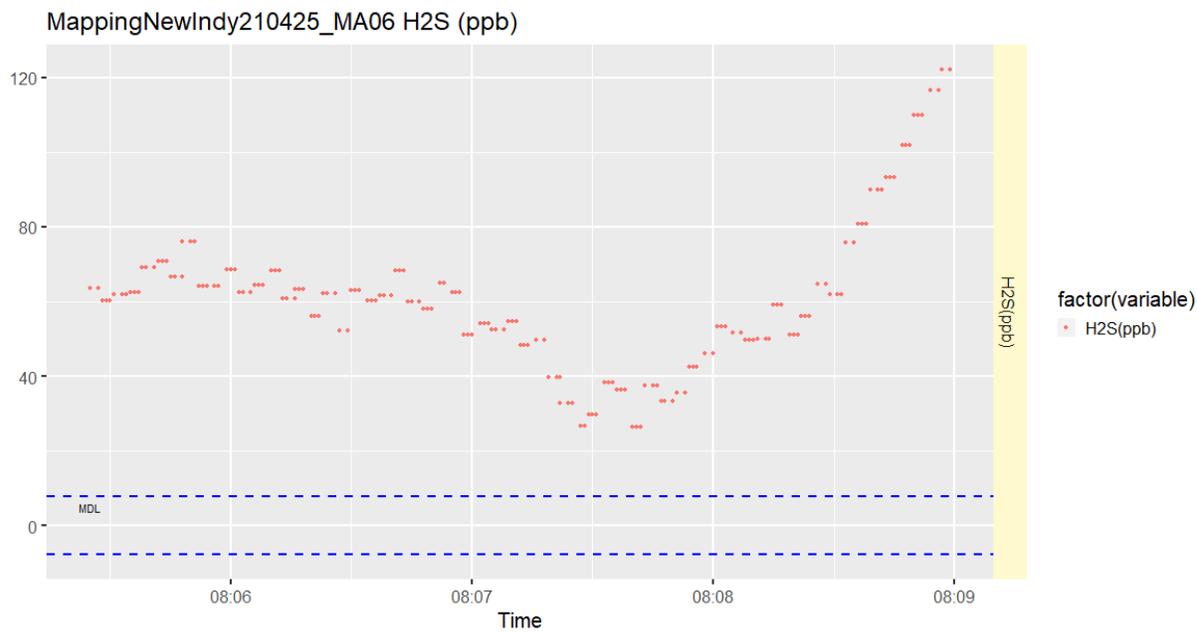


Figure 22: H₂S mobile transect timeseries – 210425MA06



Figure 23: H₂S mobile transect ribbon – 210425_MA06



Figure 24: H₂S mobile transect ribbon – 210425_MA06 (Figure 23 – inset)

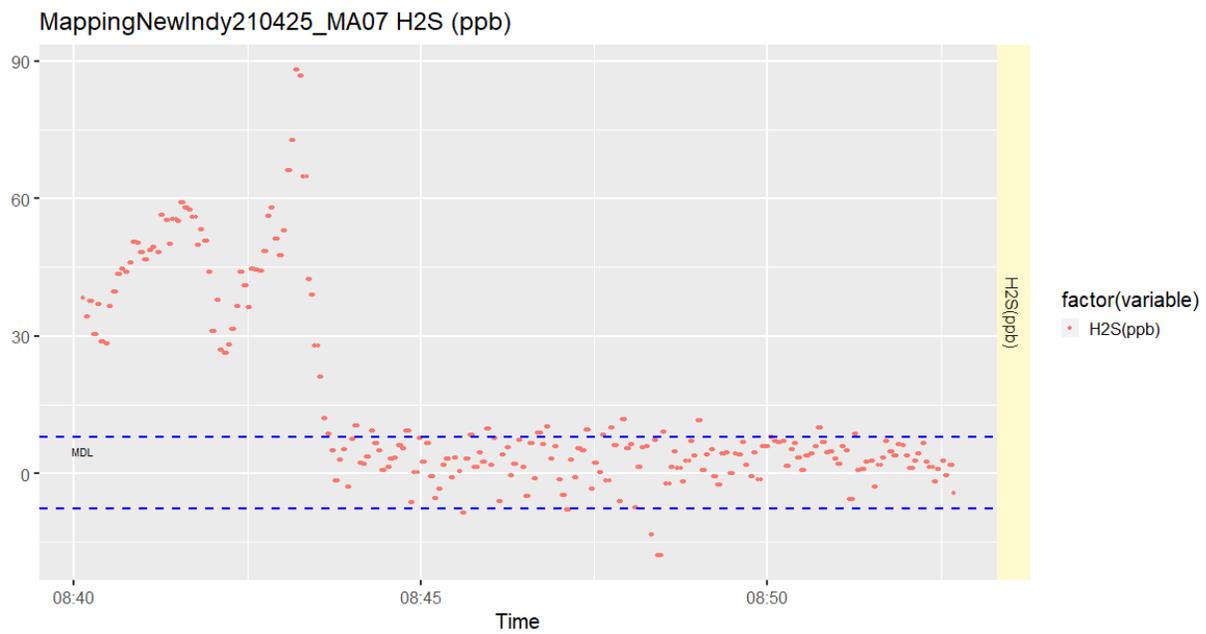


Figure 25: H₂S mobile transect timeseries – 210425MA07

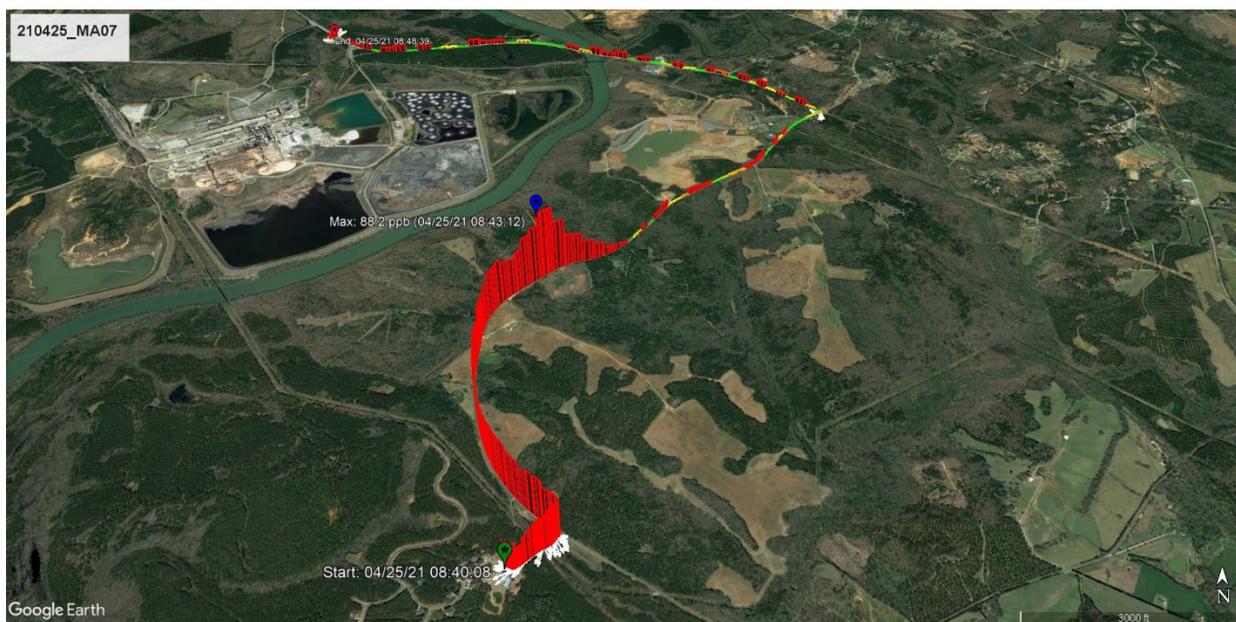


Figure 26: H₂S mobile transect ribbon – 210425_MA07

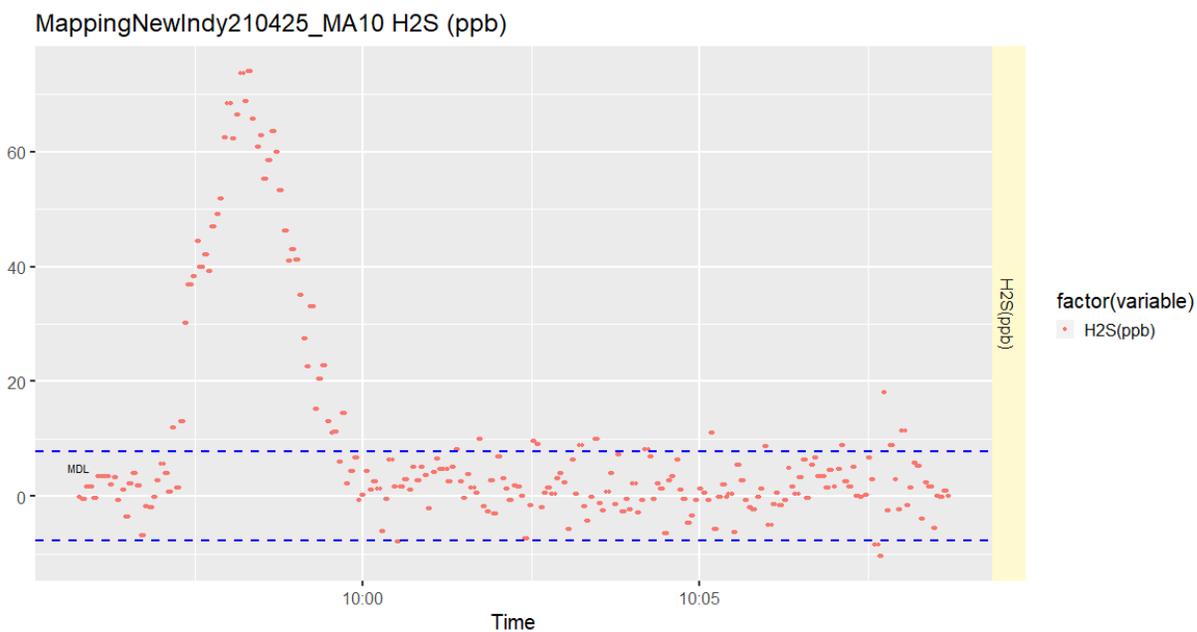


Figure 27: H₂S mobile transect timeseries – 210425MA10



Figure 28: H₂S mobile transect ribbon – 210425_MA10

Stationary GMAP measurements – April 25, 2021

STATIONARY MEASUREMENTS APRIL 25, 2021	H₂S (PPB)		
ATSDR ACUTE (≤14 DAY) MRL	70		
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20		
ATSDR CHRONIC (≥365 DAYS) MRL	-		
GMAP MDL	7.86		
	max 1-sec conc	duration	avg H ₂ S (ppb)
*210425_ST01	387.41	62 min	173.22
*210425_ST02	102.63	30 min	65.85
210425_ST03	12.25		
210425_ST04	13.16		

Table 9: Maximum one-second concentrations from stationary measurements - April 25, 2021

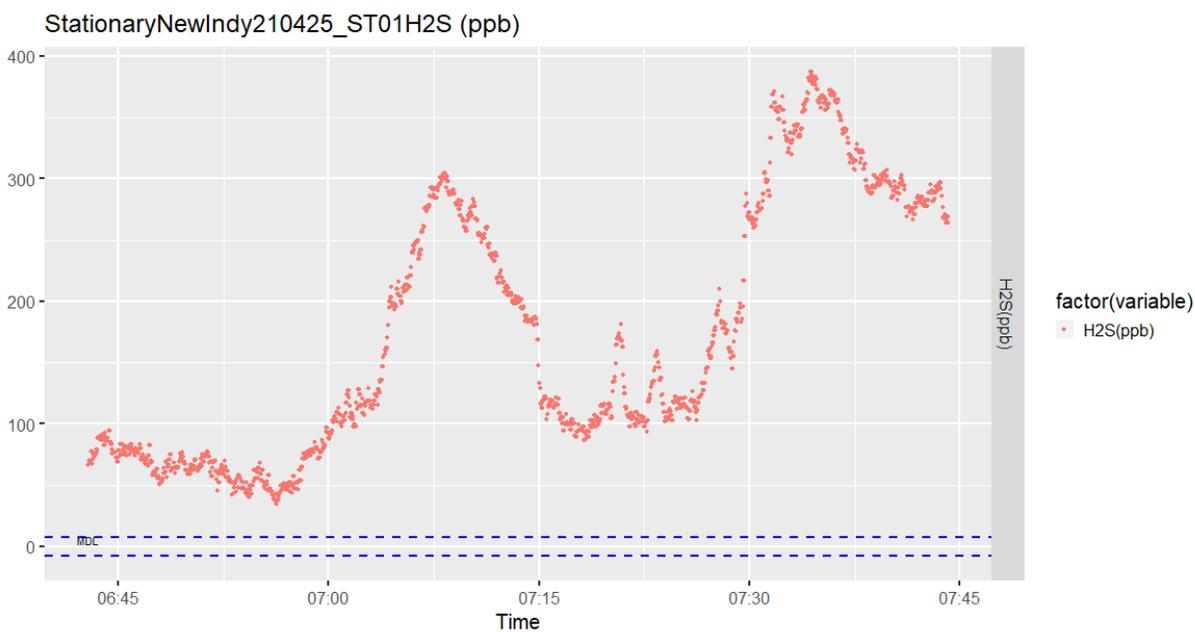


Figure 29: H₂S stationary timeseries– 210425_ST01

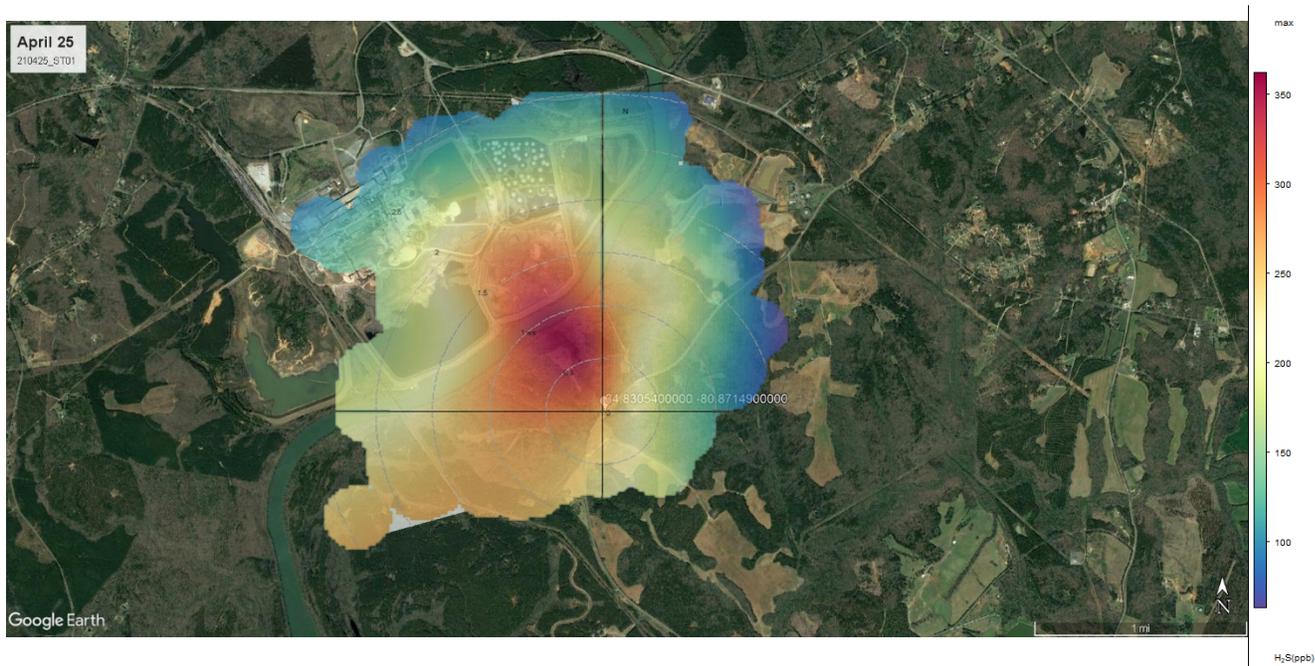


Figure 30: H₂S stationary Polar Plot– 210425_ST01

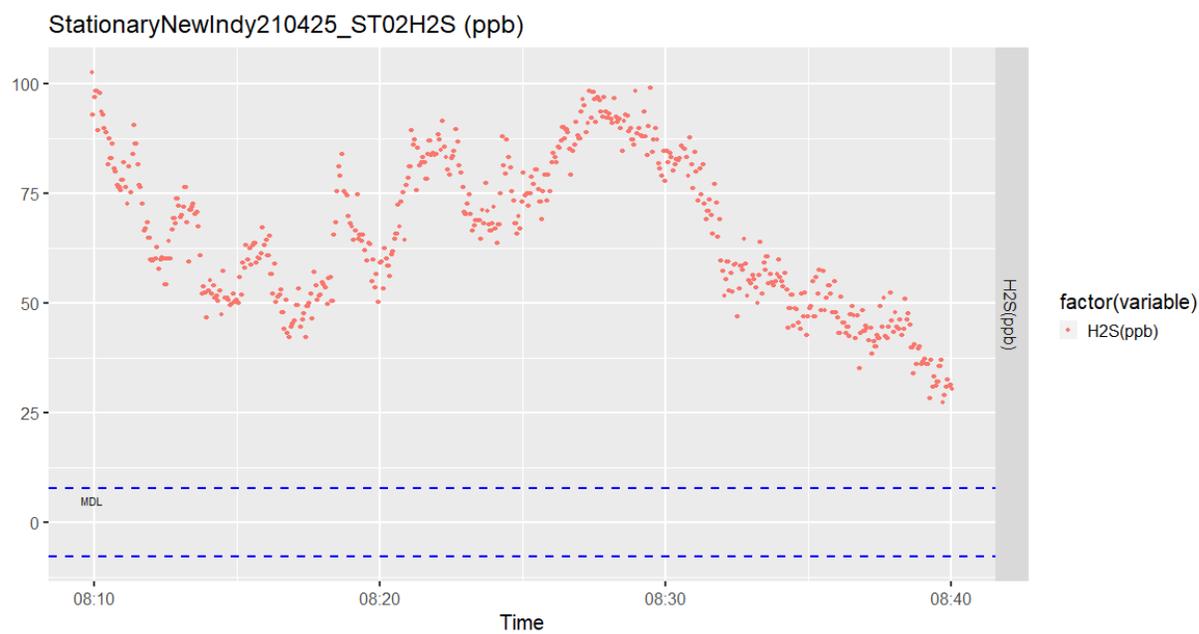


Figure 31: H₂S stationary timeseries– 210425_ST02

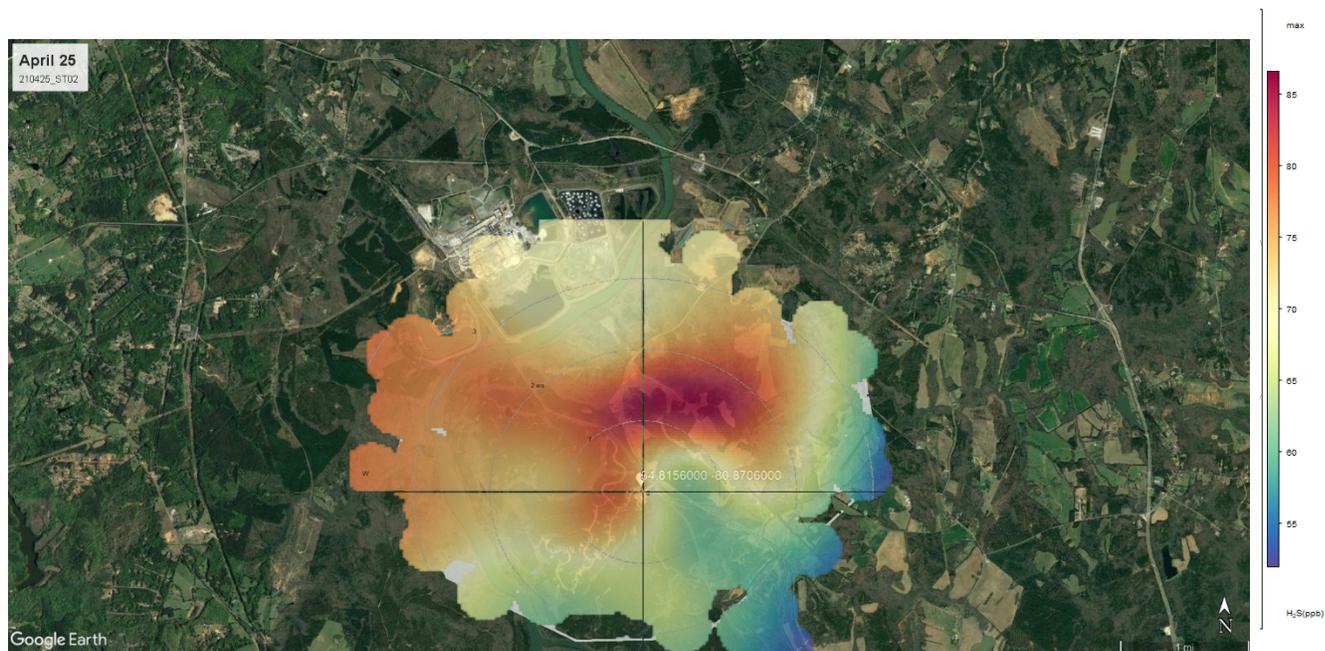


Figure 32: H₂S stationary Polar Plot– 210425_ST02

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Mobile GMAP measurements – April 26, 2021

MOBILE MEASUREMENTS - APRIL 26, 2021	H₂S (PPB)
ATSDR ACUTE (≤ 14 DAY) MRL	70
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20
ATSDR CHRONIC (≥ 365 DAYS) MRL	-
GMAP MDL	7.86
	max 1-sec conc
*210426_MA01	777.78
*210426_MA02	788.76
*210426_MA03	516.70
*210426_MA04	807.60
*210426_MA05	691.11
*210426_MA06	194.25
*210426_MA07	98.34

Table 10: Maximum one-second concentrations from mobile measurements - April 26, 2021

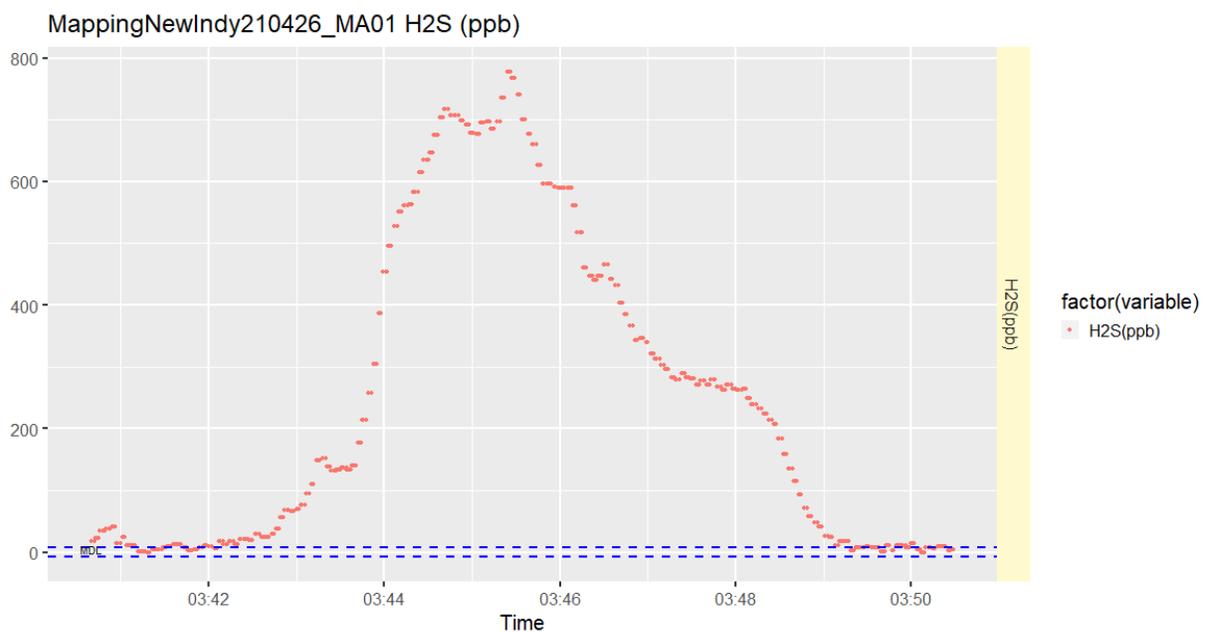


Figure 33: H₂S mobile transect timeseries – 210426MA01

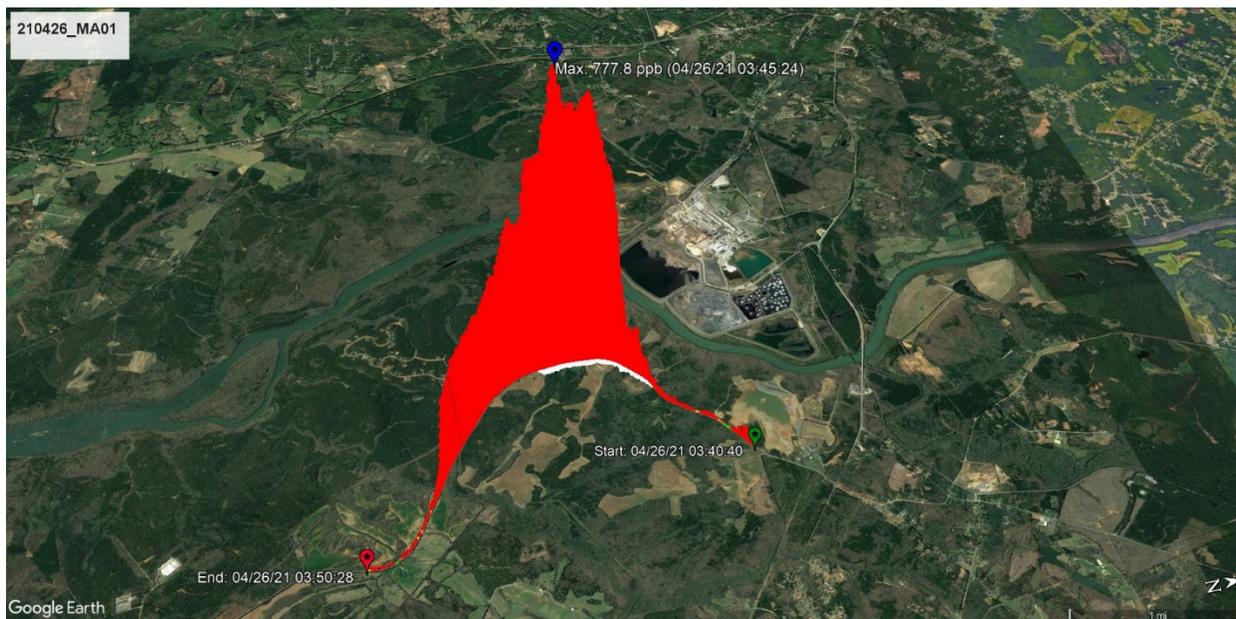


Figure 34: H₂S mobile transect ribbon – 210426_MA01

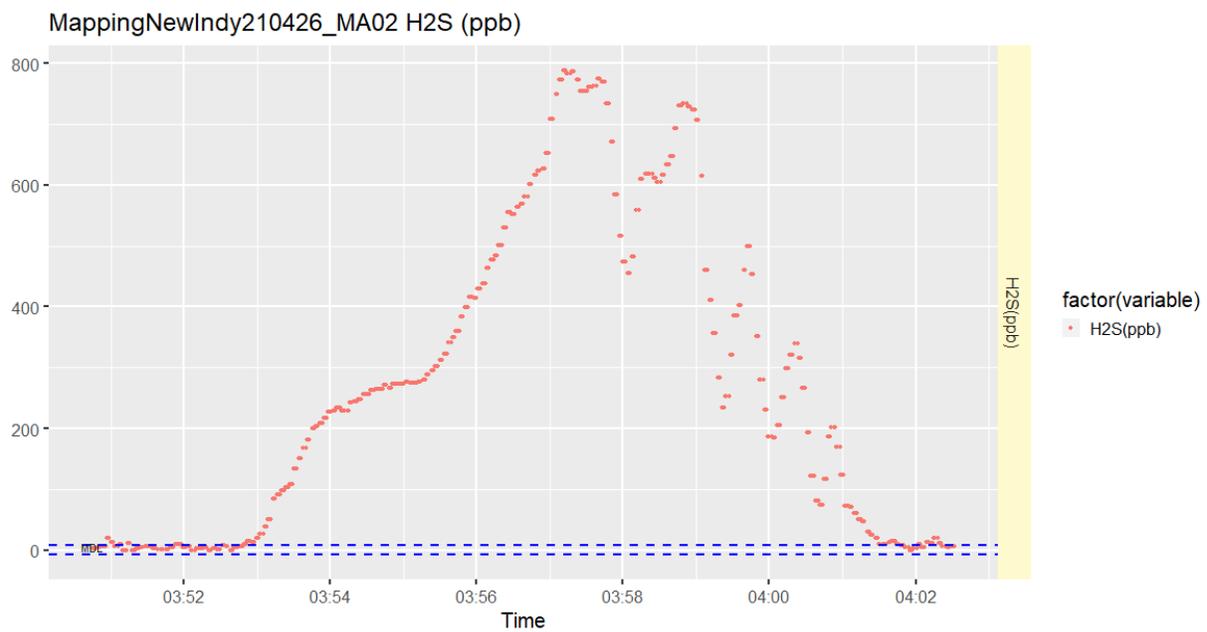


Figure 35: H₂S mobile transect timeseries – 210426MA02

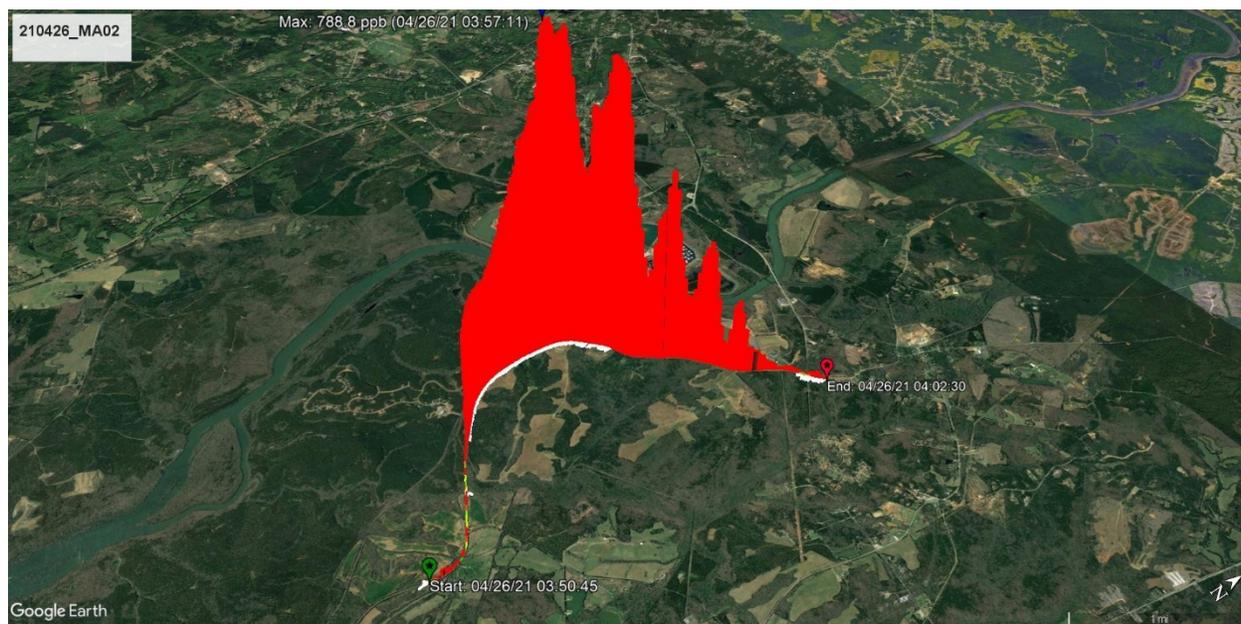


Figure 36: H₂S mobile transect ribbon – 210426_MA02

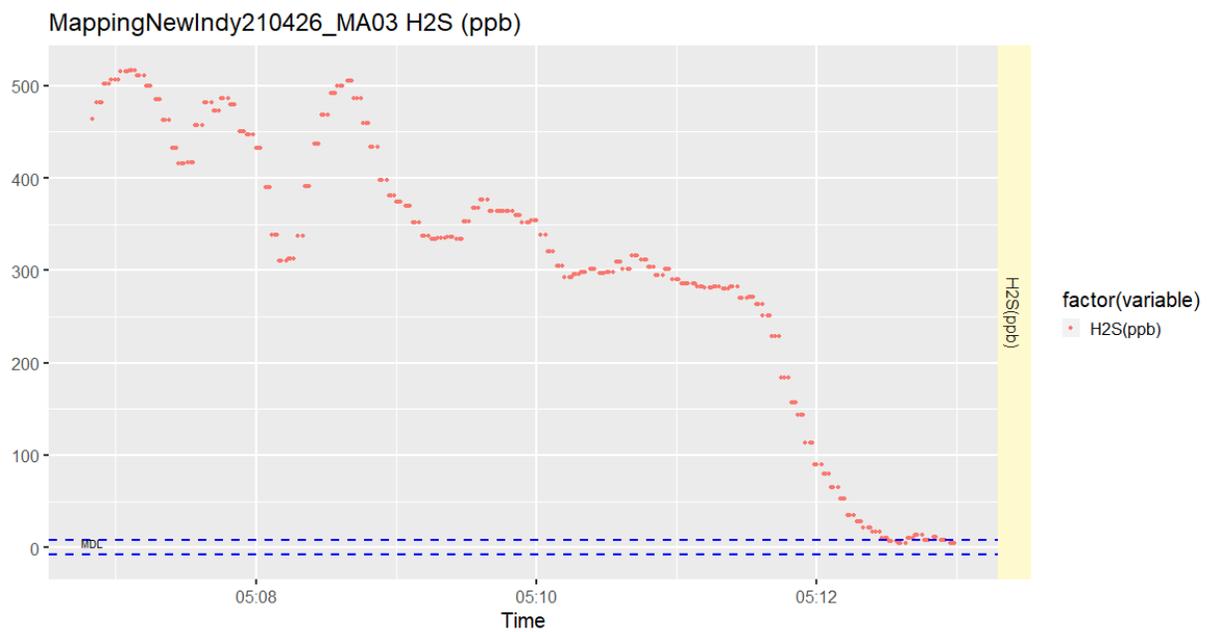


Figure 37: H₂S mobile transect timeseries – 210426MA03

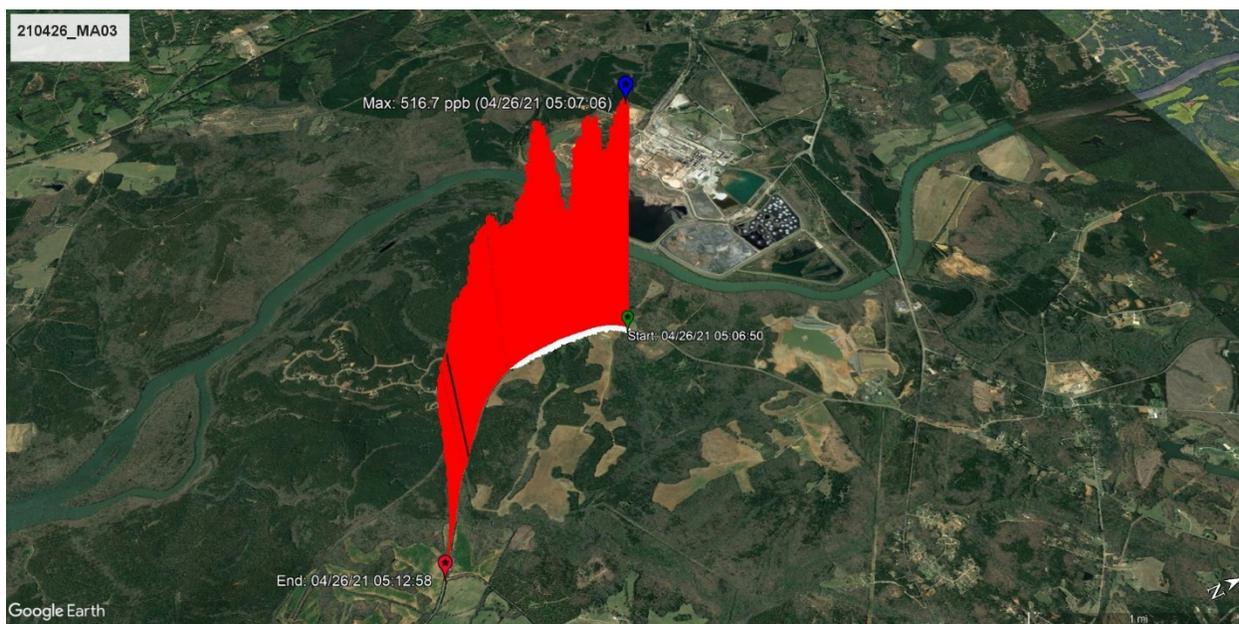


Figure 38: H₂S mobile transect ribbon – 210426_MA03

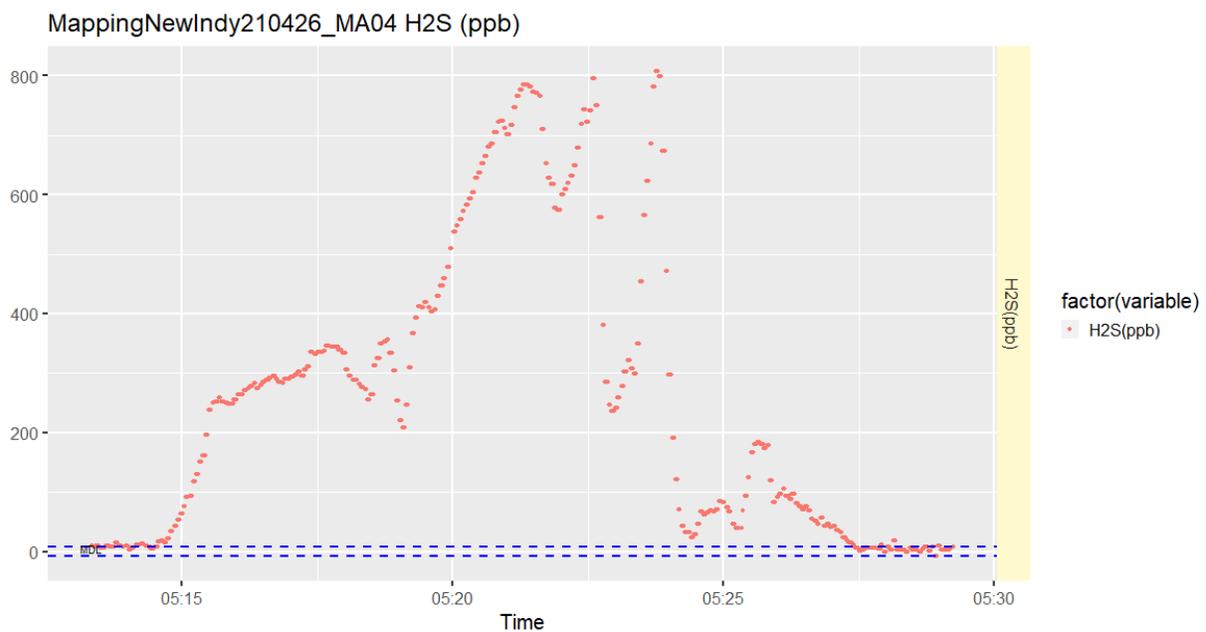


Figure 39: H₂S mobile transect timeseries – 210426MA04

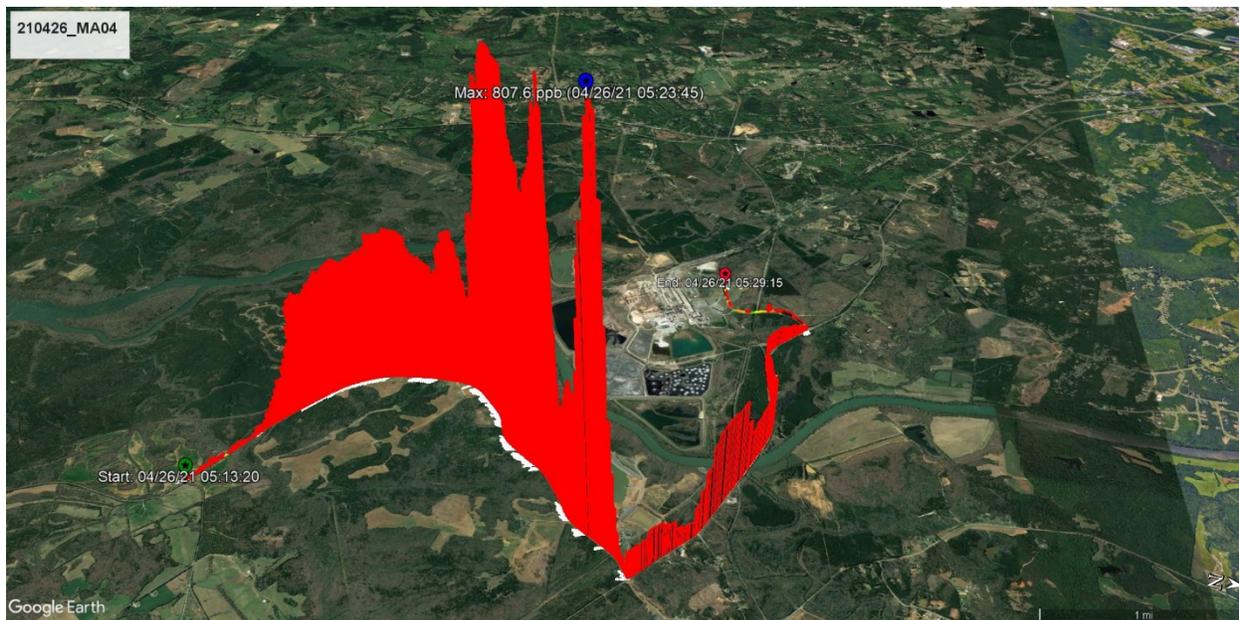


Figure 40: H₂S mobile transect ribbon – 210426_MA04

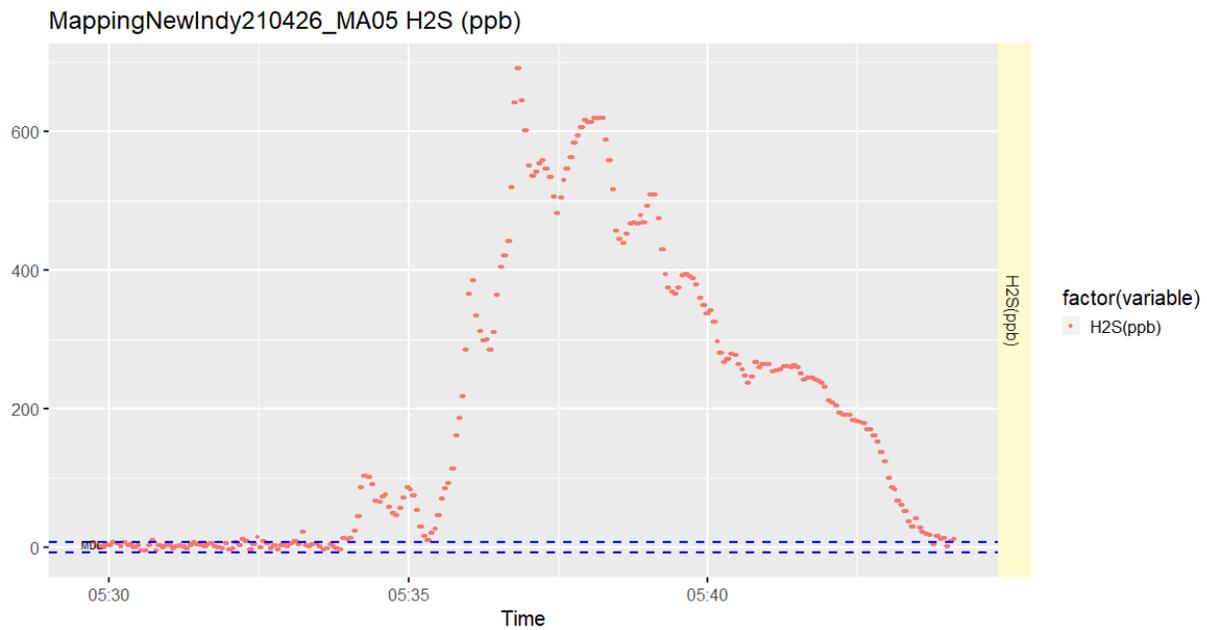


Figure 41: H₂S mobile transect timeseries – 210426MA05

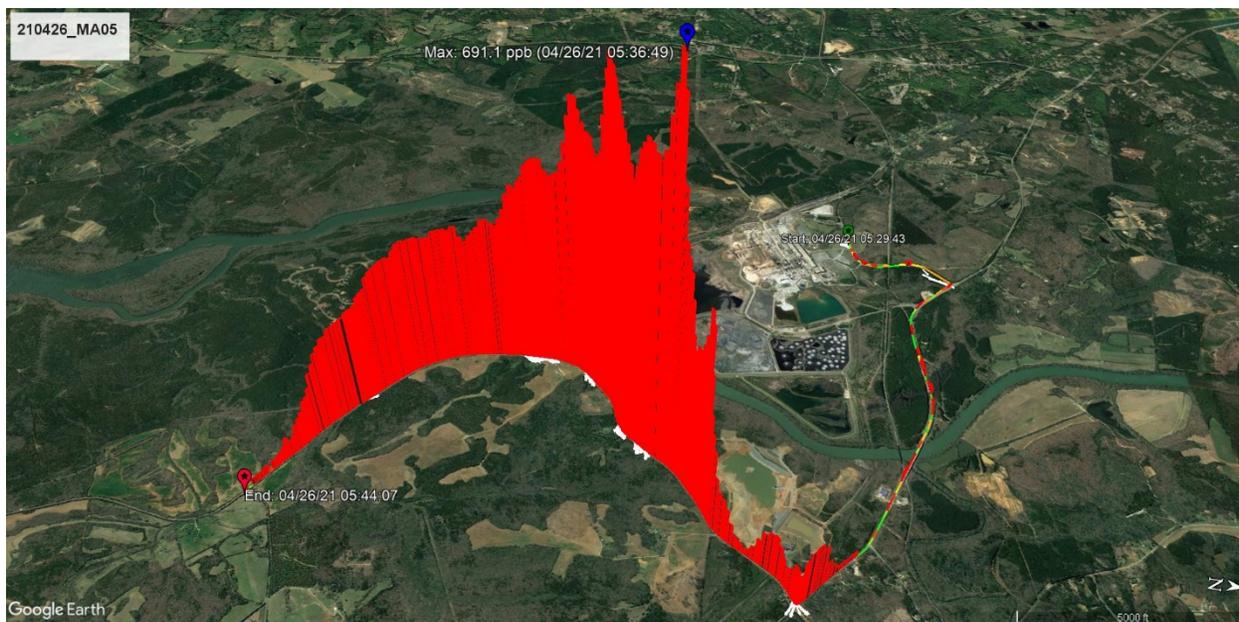


Figure 42: H₂S mobile transect ribbon – 210426_MA05

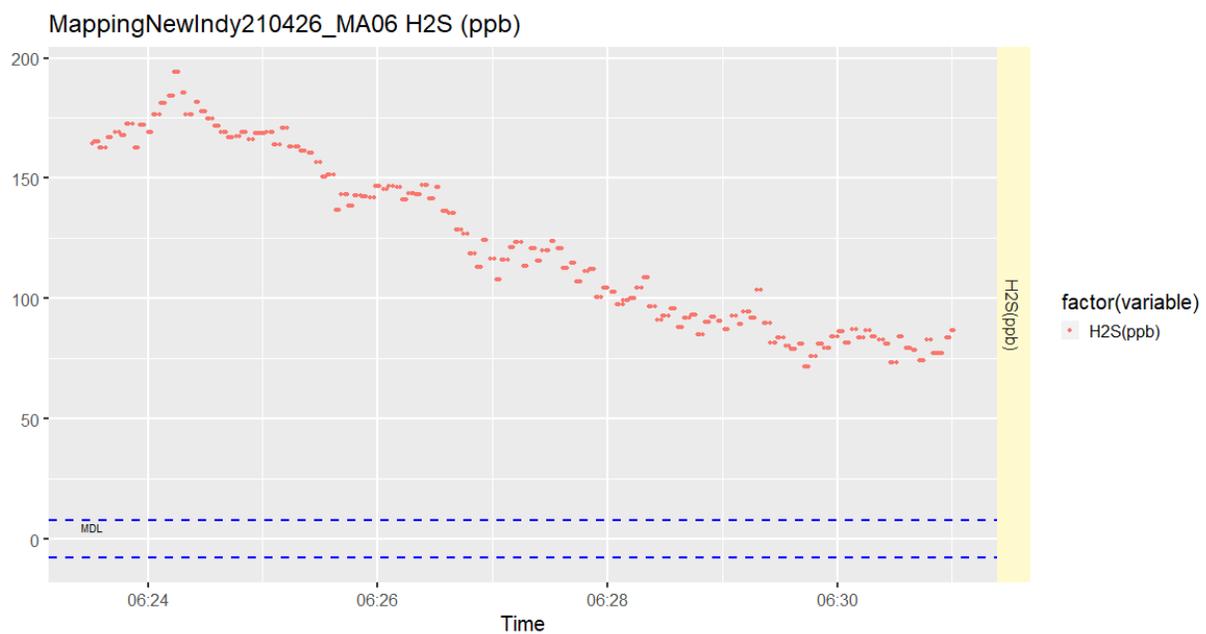


Figure 43: H₂S mobile transect timeseries – 210426MA06

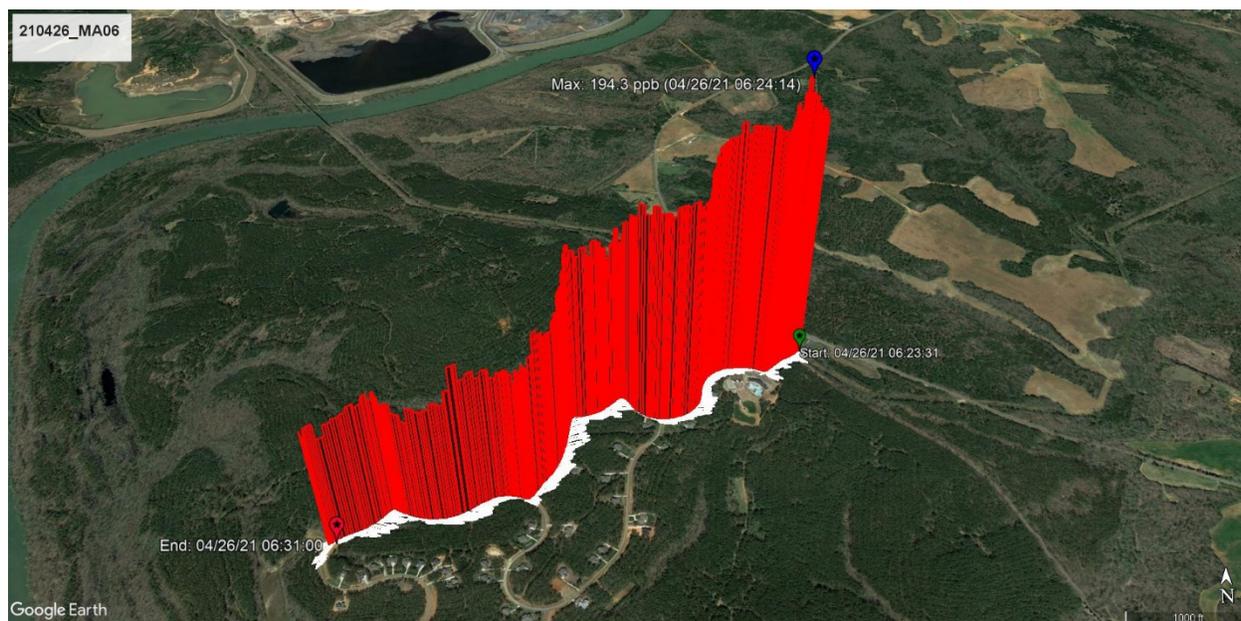


Figure 44: H₂S mobile transect ribbon – 210426_MA06

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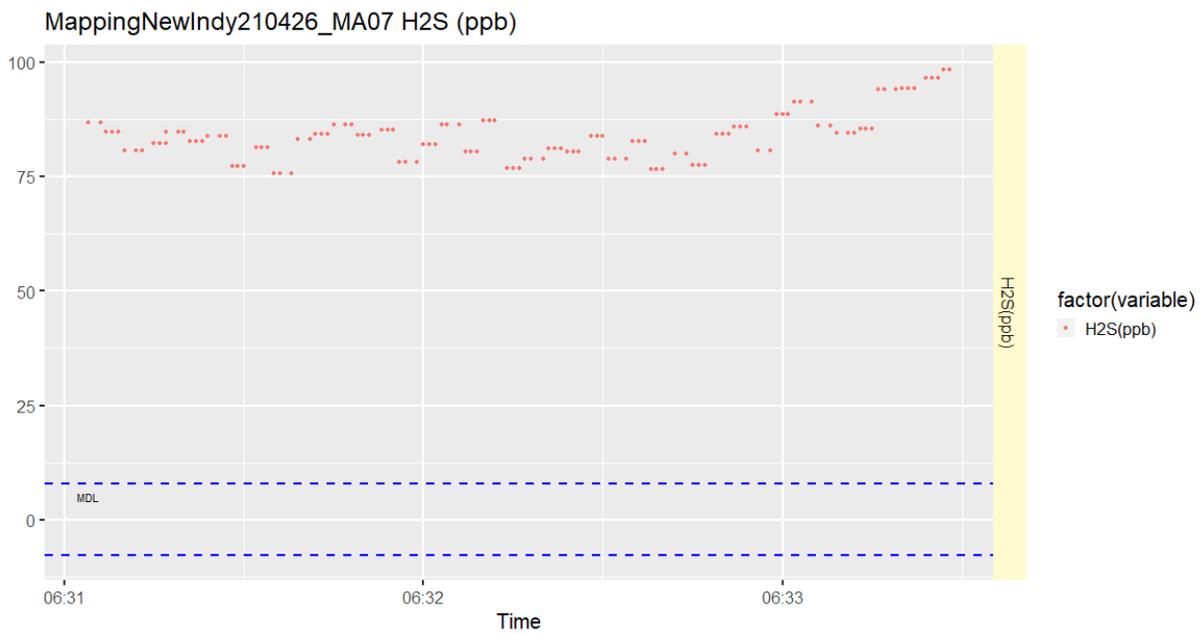


Figure 45: H₂S mobile transect timeseries – 210426MA07



Figure 46: H₂S mobile transect ribbon – 210426_MA07

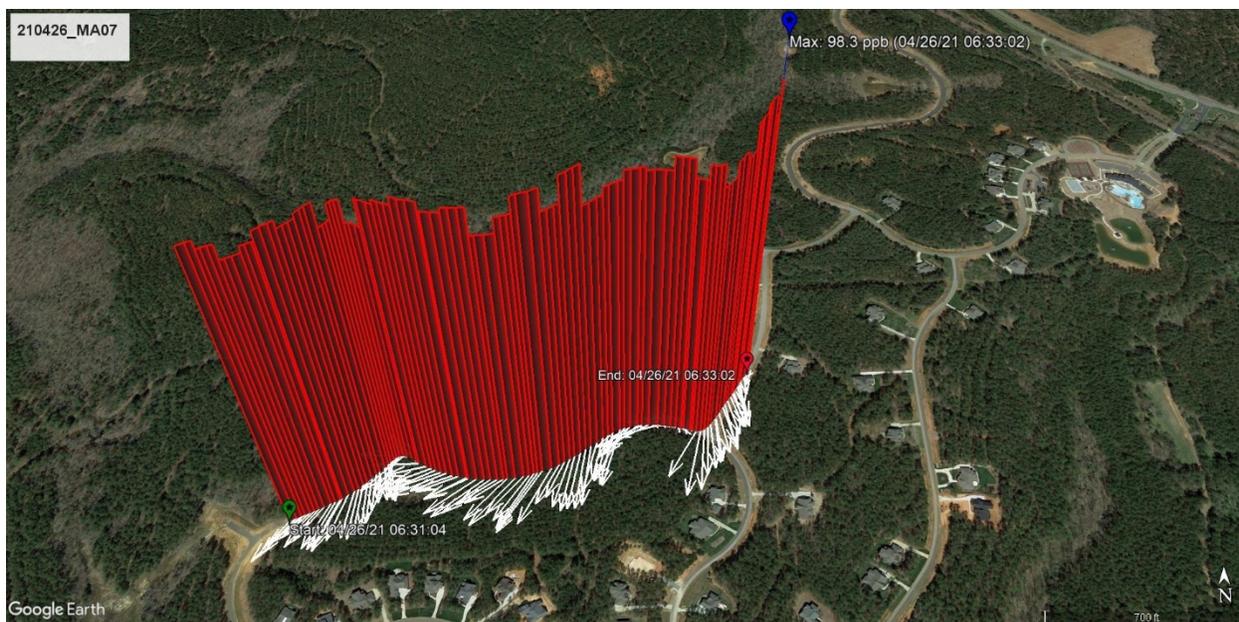


Figure 47: H₂S mobile transect ribbon – 210426_MA07 (Fig 46 - inset)

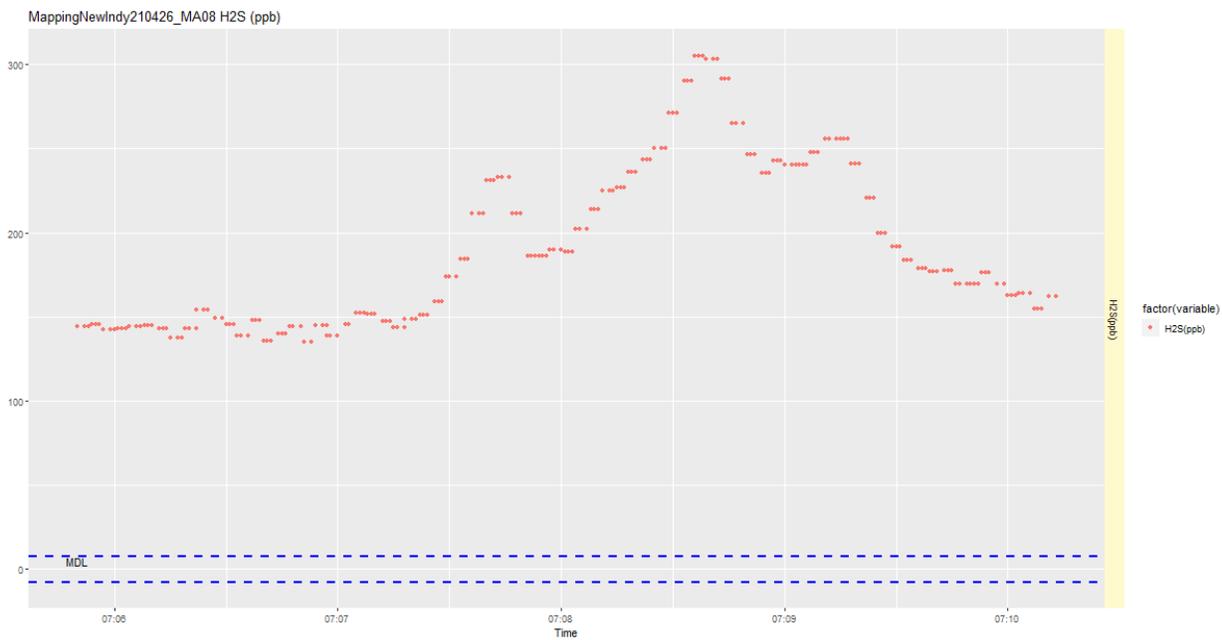


Figure 48: H₂S mobile transect timeseries – 210426MA08

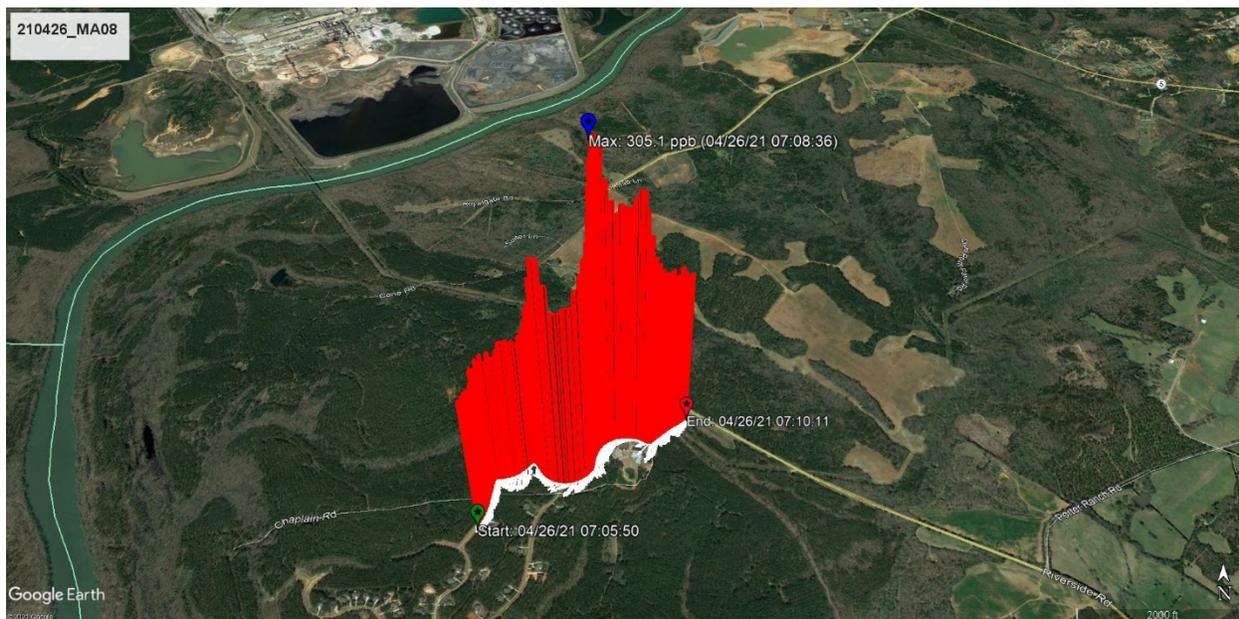


Figure 49: H₂S mobile transect ribbon – 210426_MA08

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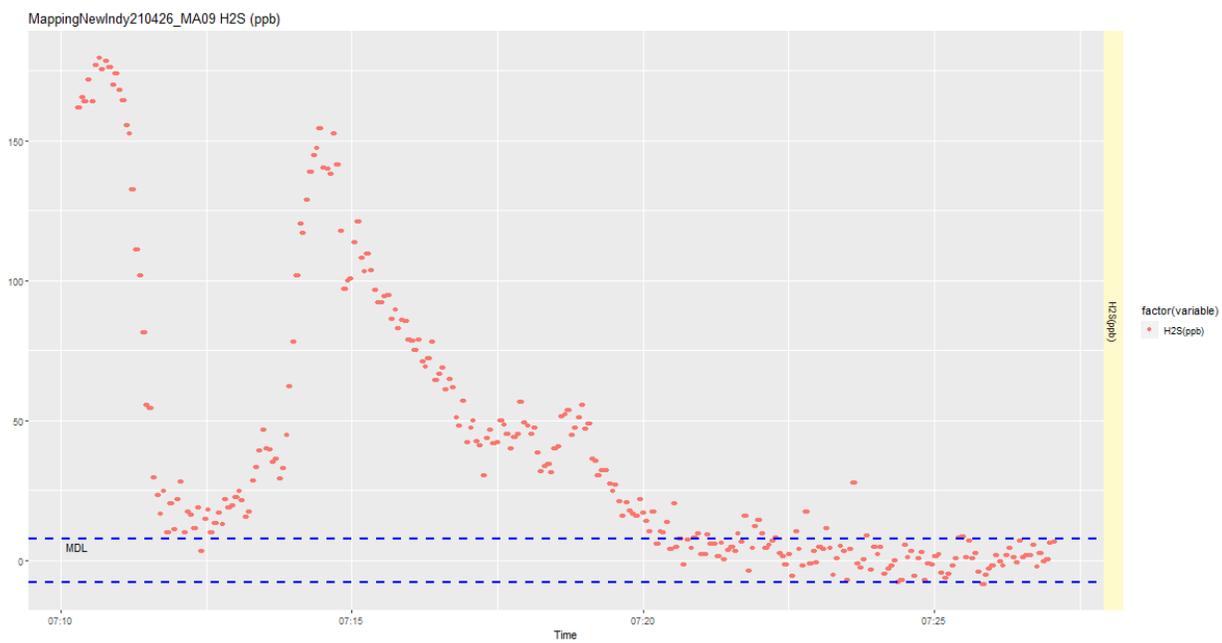


Figure 50: H₂S mobile transect timeseries – 210426MA09

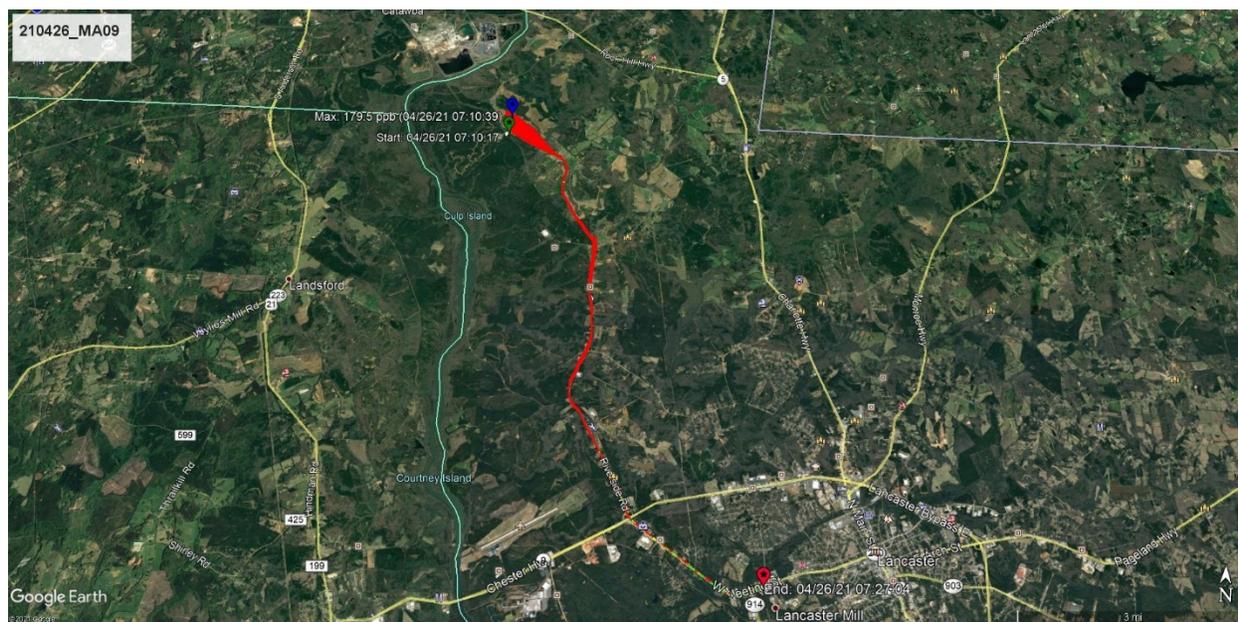


Figure 51: H₂S mobile transect ribbon – 210426_MA09

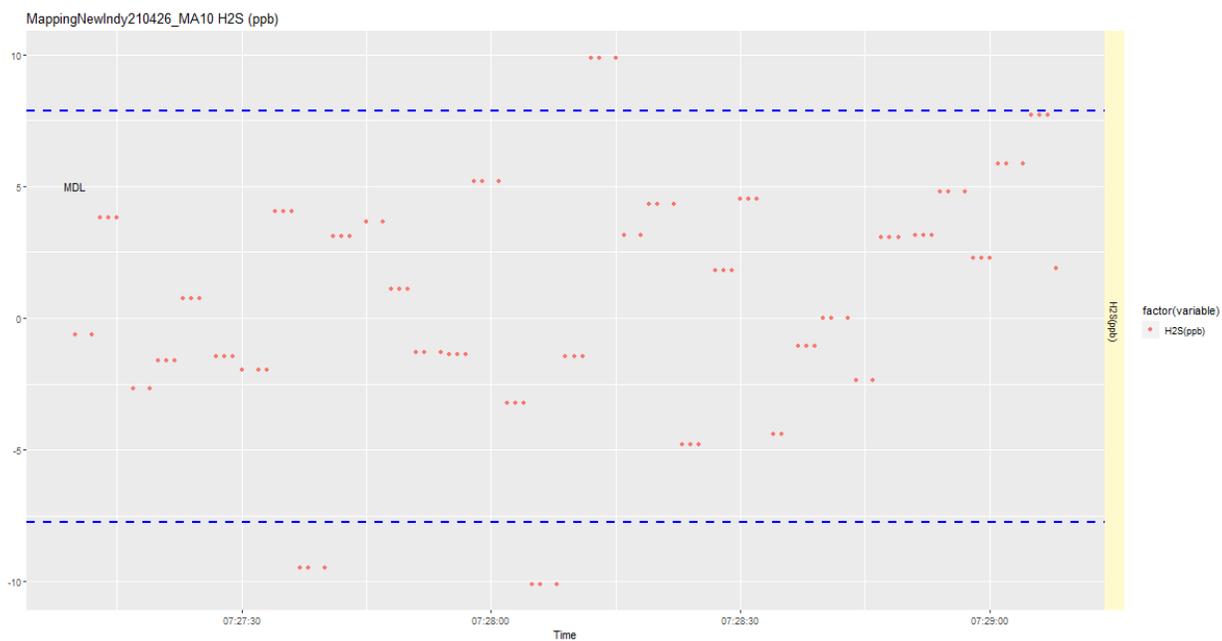


Figure 52: H₂S mobile transect timeseries – 210426MA10

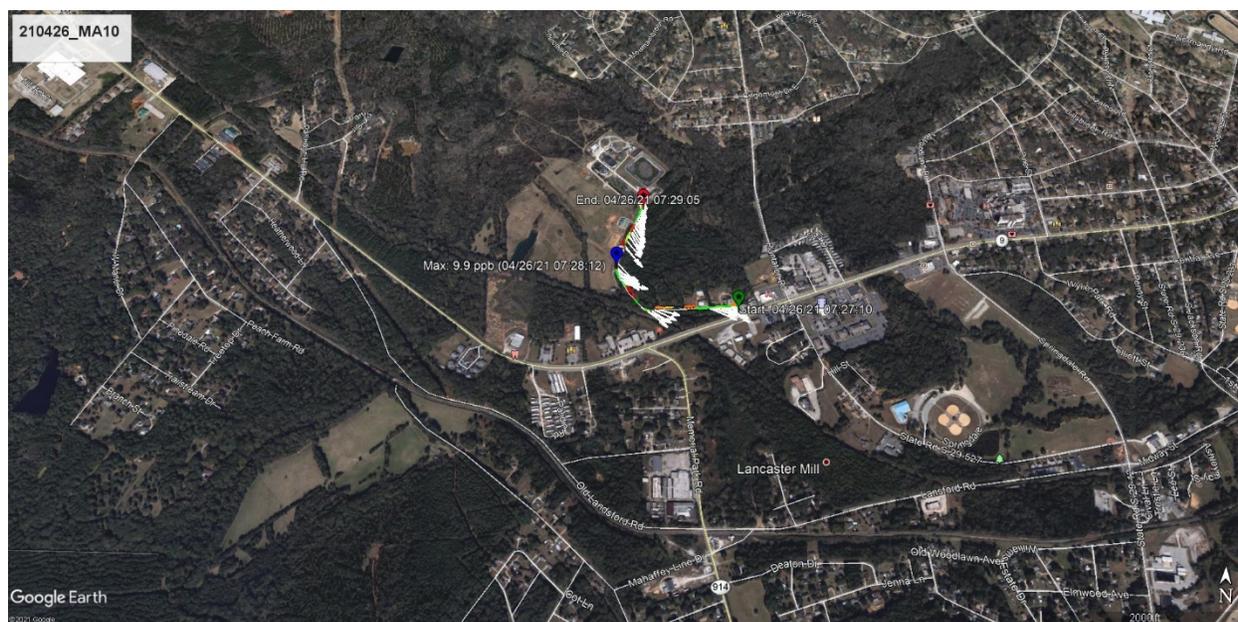


Figure 53: H₂S mobile transect ribbon – 210426_MA10

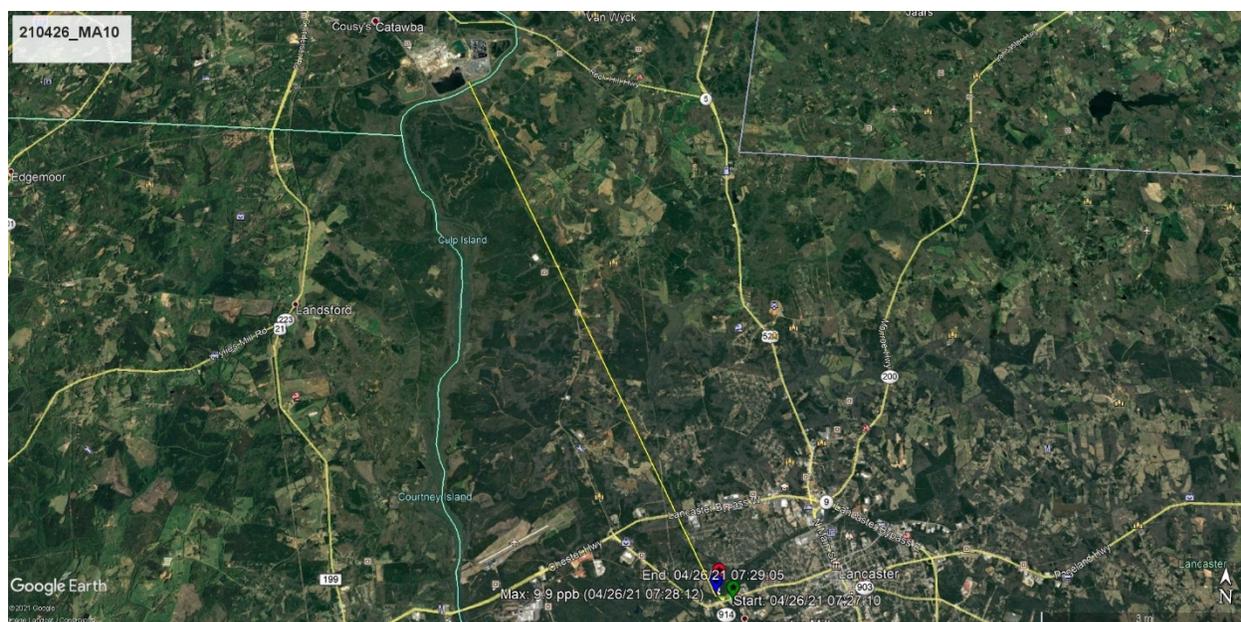


Figure 54: H₂S mobile transect ribbon distance from New Indy – 210426_MA10 (Same transect as Figure 53)



Figure 55: H₂S mobile transect timeseries – 210426MA11

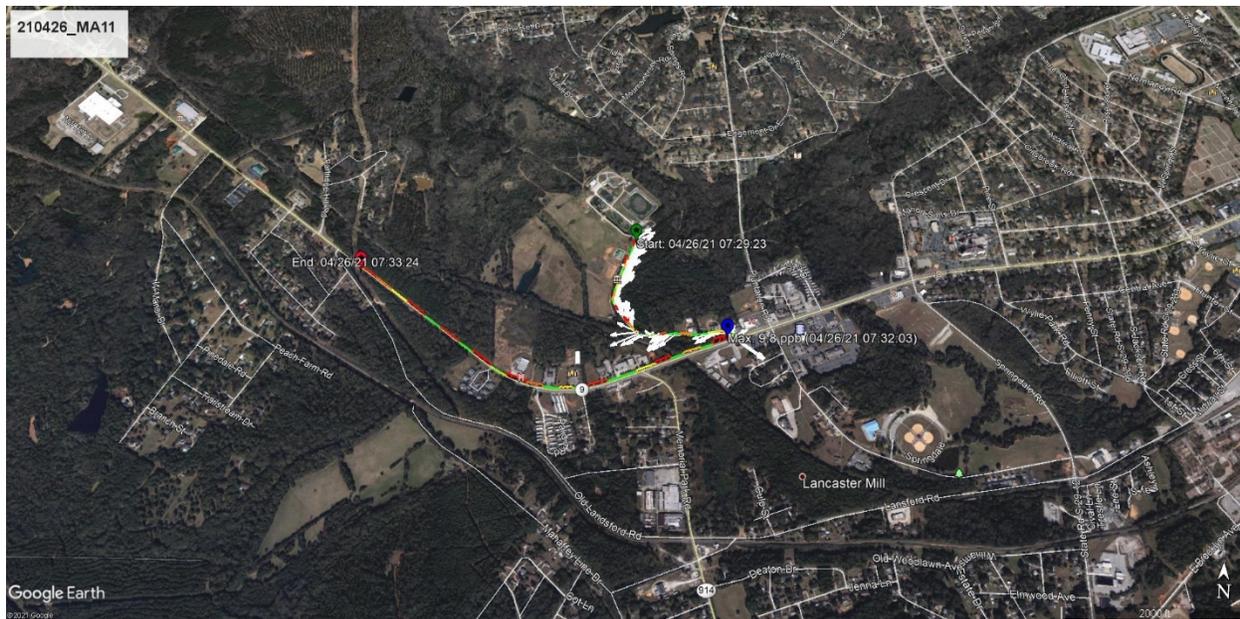


Figure 56: H₂S mobile transect ribbon – 210426_MA11

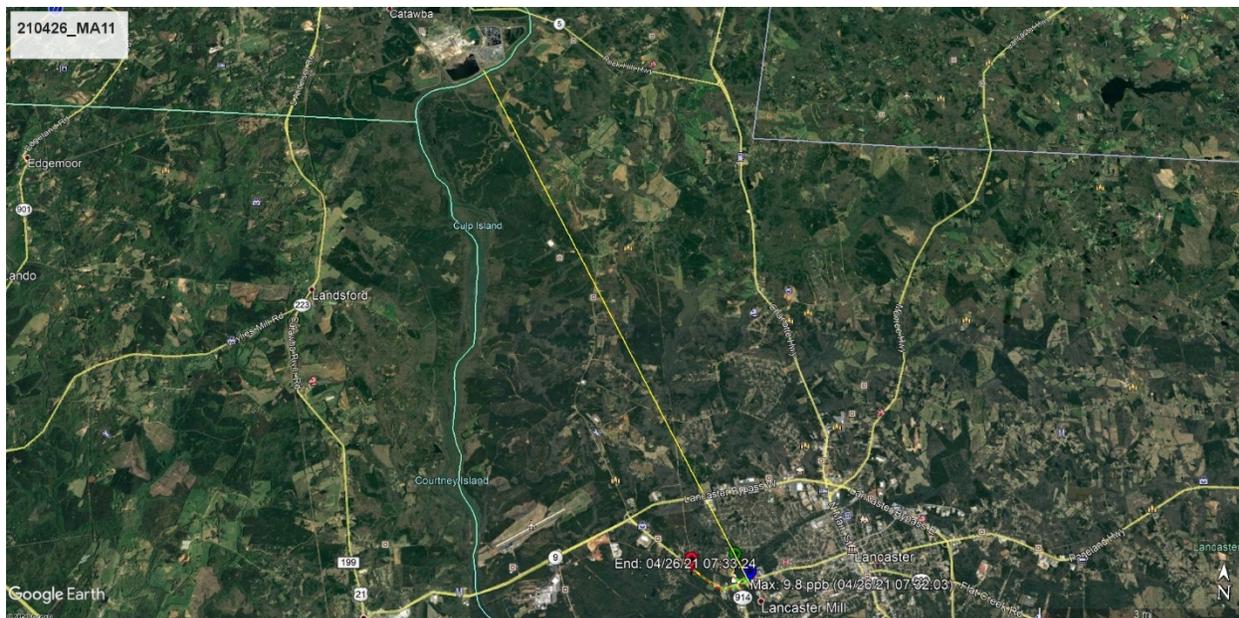


Figure 57: H₂S mobile transect ribbon – distance from New Indy – 210426_MA11 (same transect as Figure 56)

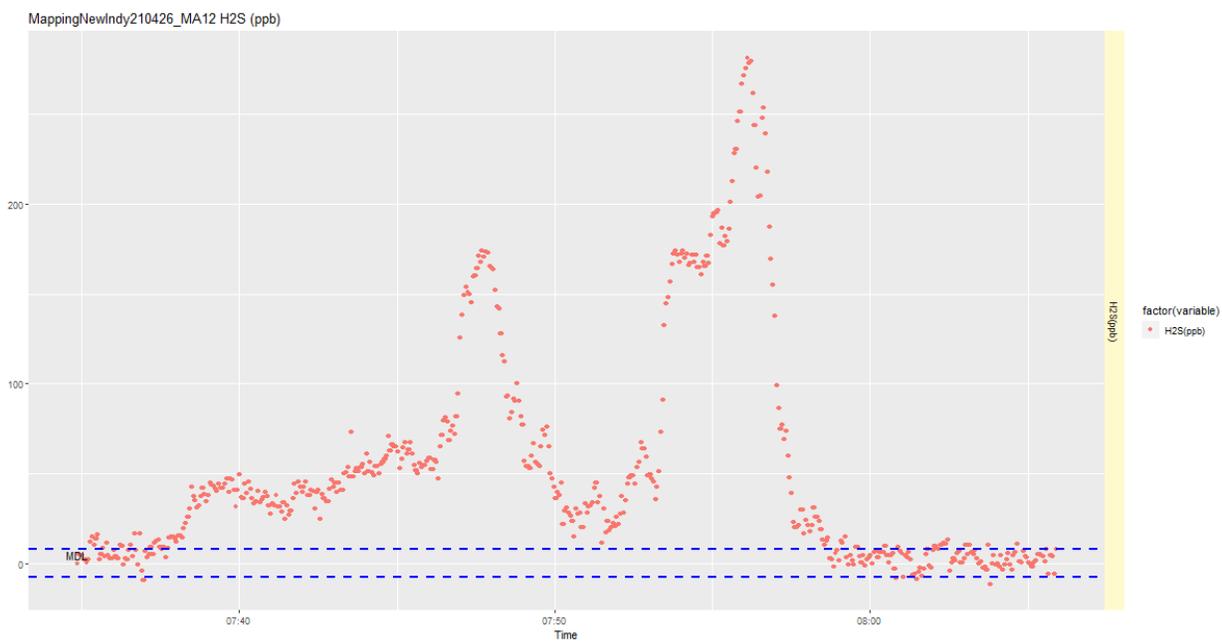


Figure 58: H₂S mobile transect timeseries – 210426MA12

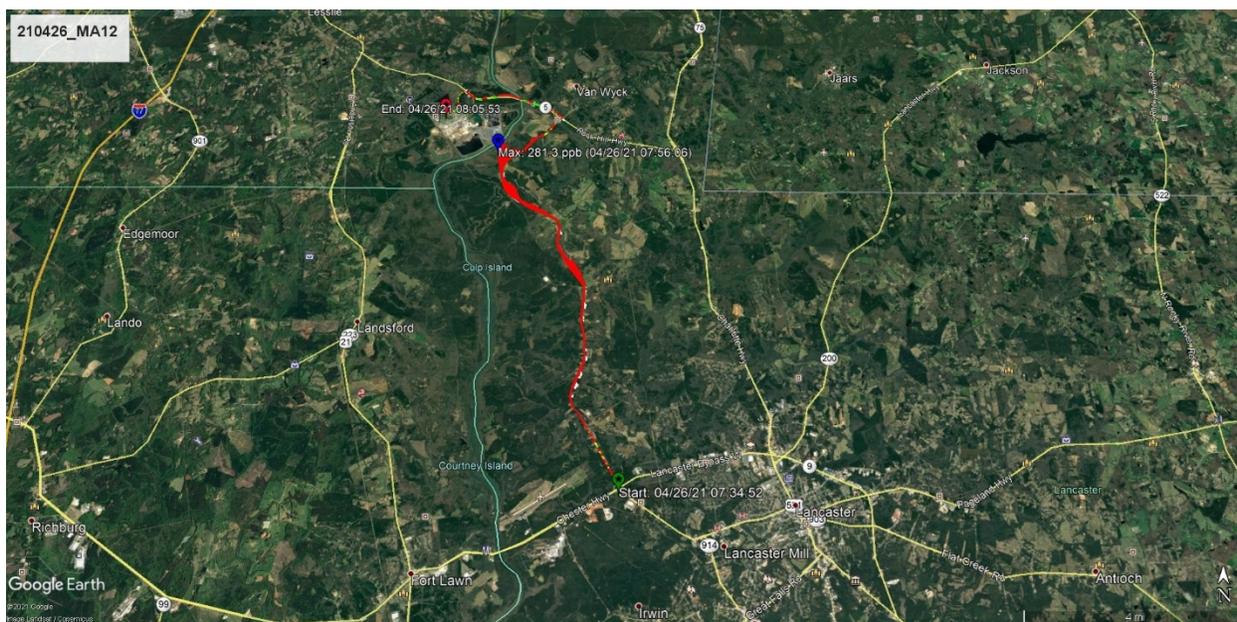


Figure 59: H₂S mobile transect ribbon – 210426_MA12

Stationary GMAP measurements – April 26, 2021

STATIONARY MEASUREMENTS – APRIL 26, 2021	H₂S (PPB)		
ATSDR ACUTE (≤14 DAY) MRL	70		
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20		
ATSDR CHRONIC (≥365 DAYS) MRL	-		
GMAP MDL	7.86		
	max 1-sec conc	duration	avg H ₂ S (ppb)
*210426_ST01	943.74	60 min	669.4
*210426_ST02	219.2	30 min	187.9
*210426_ST03	193.11	30 min	110.1

Table 11; Maximum one-second concentrations from stationary measurements - April 26, 2021

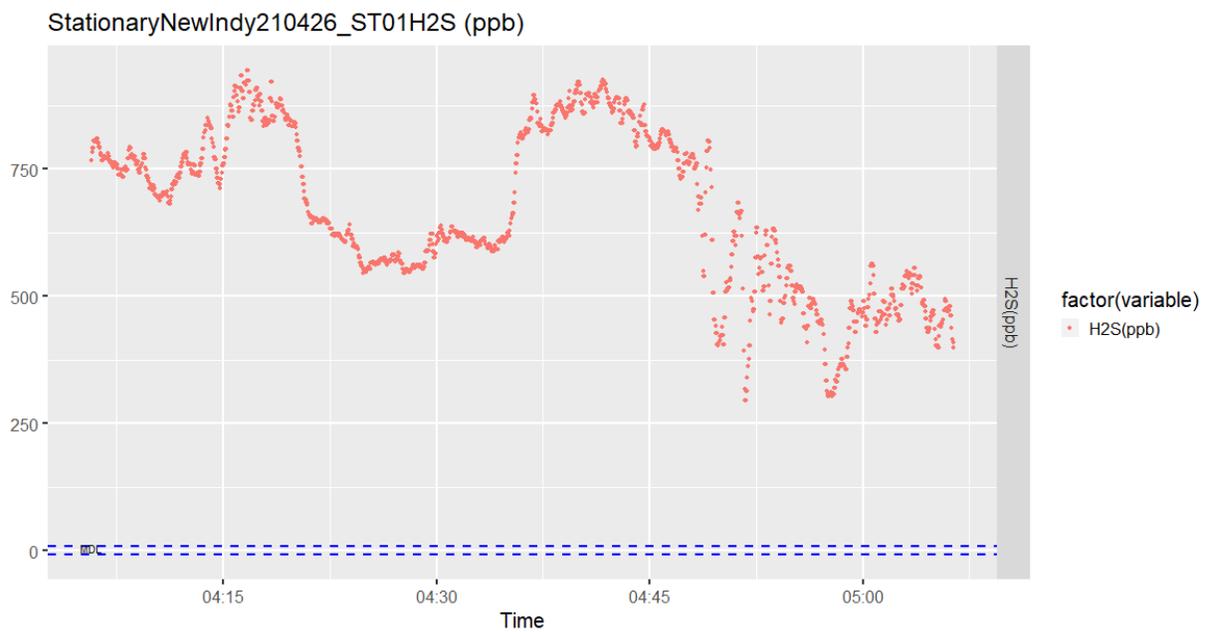


Figure 60: H₂S stationary timeseries– 210426_ST01

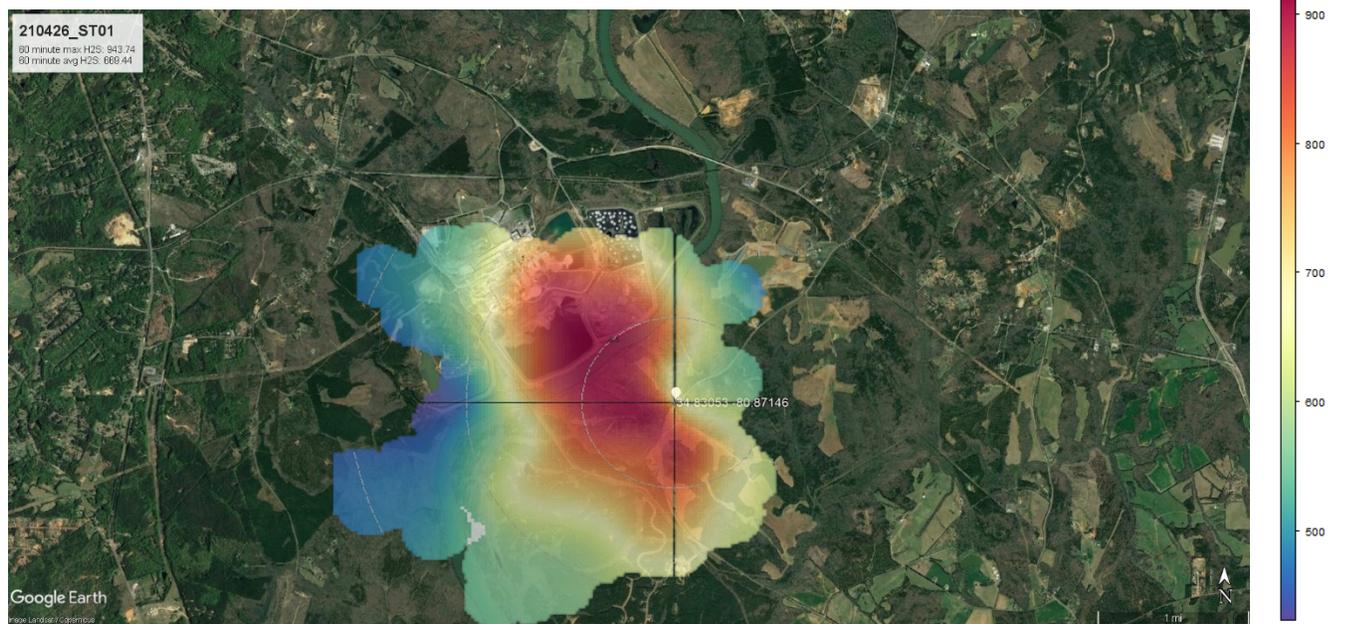


Figure 61: H₂S stationary Polar Plot– 210426_ST01

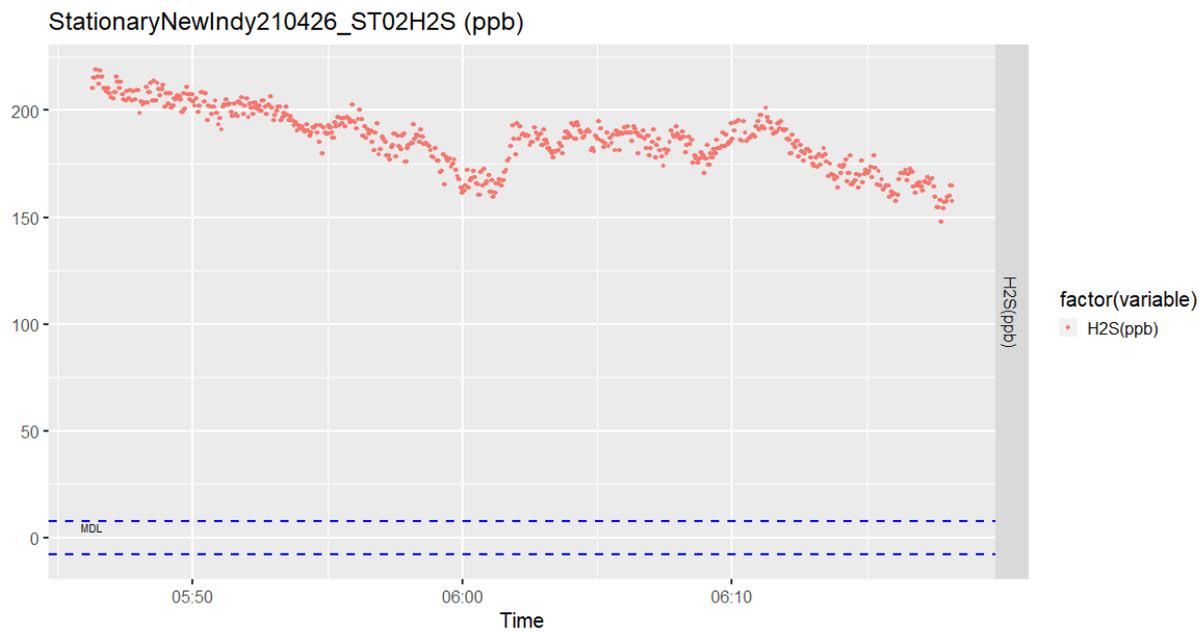


Figure 62: H₂S stationary timeseries– 210426_ST02

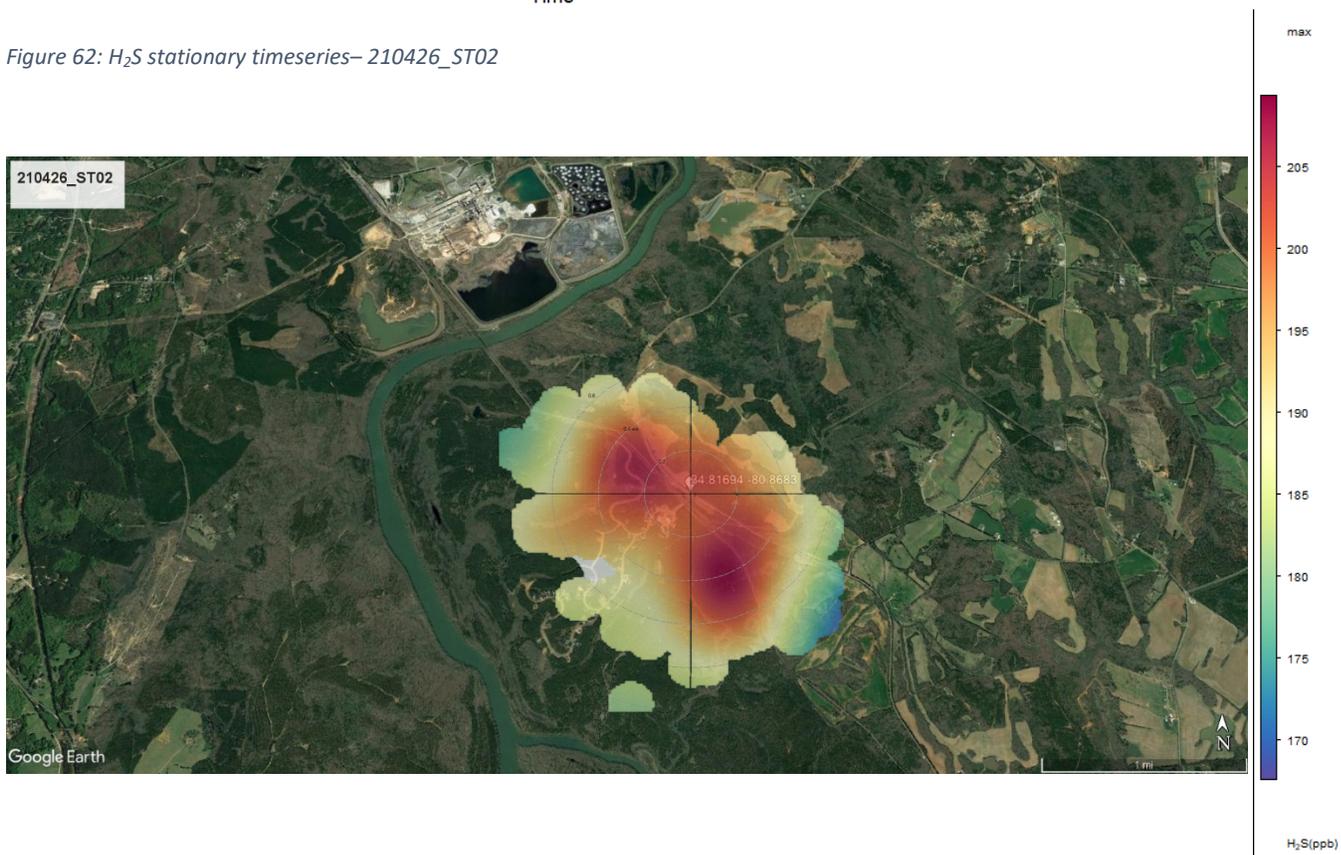


Figure 63: H₂S stationary Polar Plot– 210426_ST02

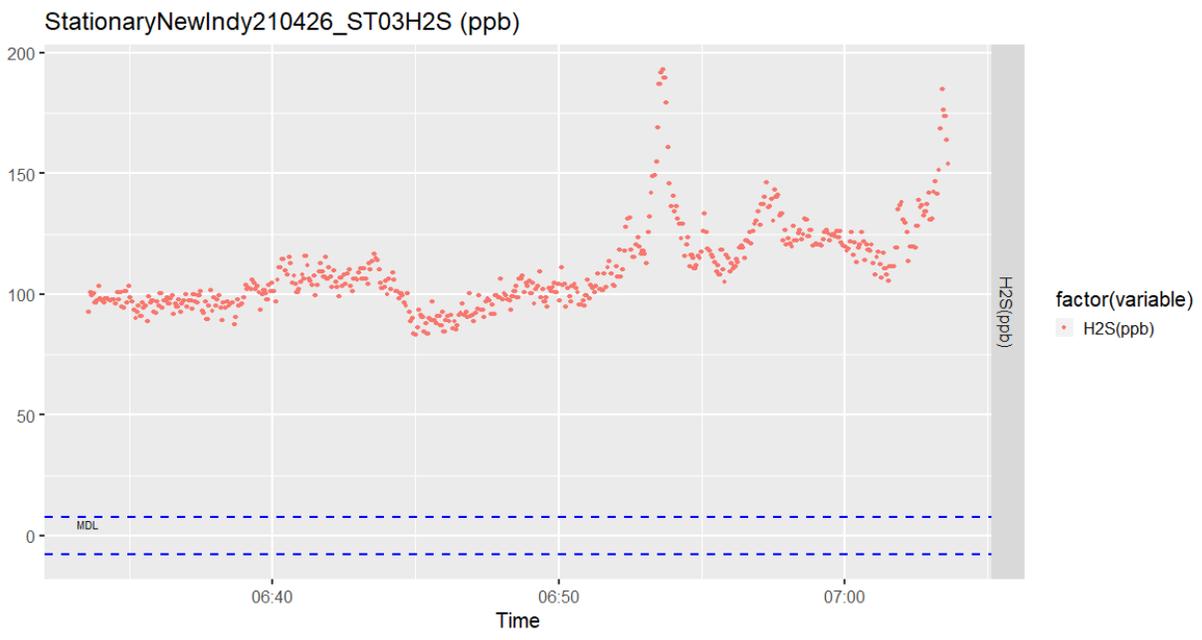


Figure 64: H₂S stationary timeseries– 210426_ST03

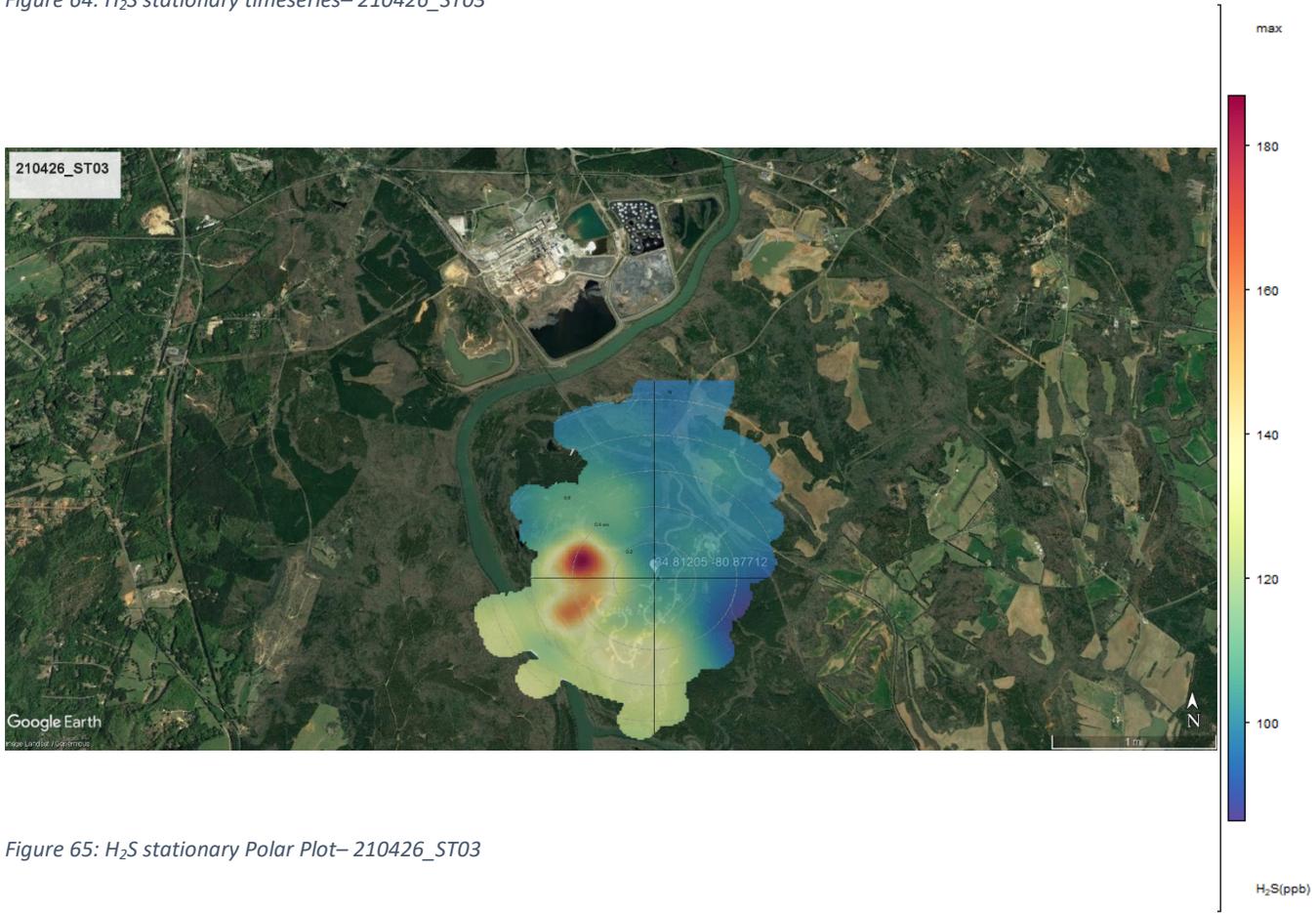


Figure 65: H₂S stationary Polar Plot– 210426_ST03

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Mobile GMAP measurements on-site of New Indy – April 26, 2021

MOBILE MEASUREMENTS – APRIL 26, 2021 ON-SITE	H₂S (PPB)
ATSDR ACUTE (≤14 DAY) MRL	70
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20
ATSDR CHRONIC (≥365 DAYS) MRL	-
GMAP MDL	7.86
	max 1-sec conc
210426_MA01	17.97
*210426_MA02	129.42
*210426_MA03	1992.50
*210426_MA04	8545.78
*210426_MA05	741.22
*210426_MA06	191.68
*210426_MA07	228.00
*210426_MA08	5021.28
*210426_MA09	196.24
*210426_MA10	97.79
210426_MA11	17.52

Table 12: Maximum one-second concentrations from mobile measurement on-site at New Indy Containerboard - April 26, 2021

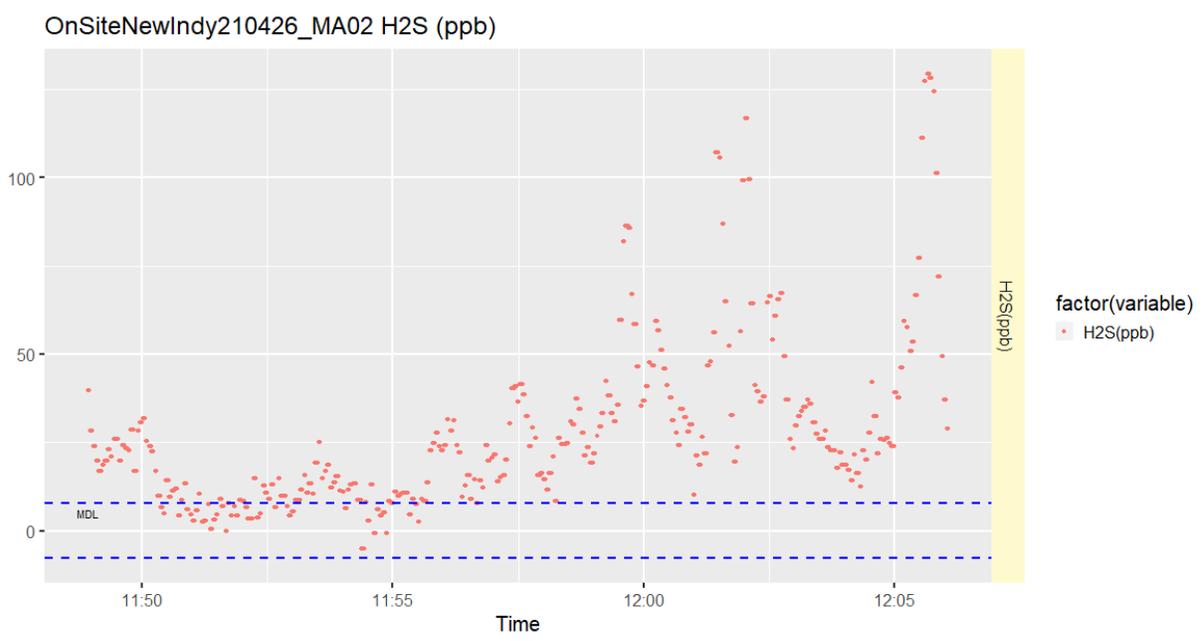


Figure 66: H₂S mobile transect timeseries on-site of New Indy – 210426MA02



Figure 67: H₂S mobile transect ribbon on-site of New Indy – 210426_MA02

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Figure 68: H₂S mobile transect ribbon on-site of New Indy – 210426_MA02 (same transect as Figure 67, rotated)

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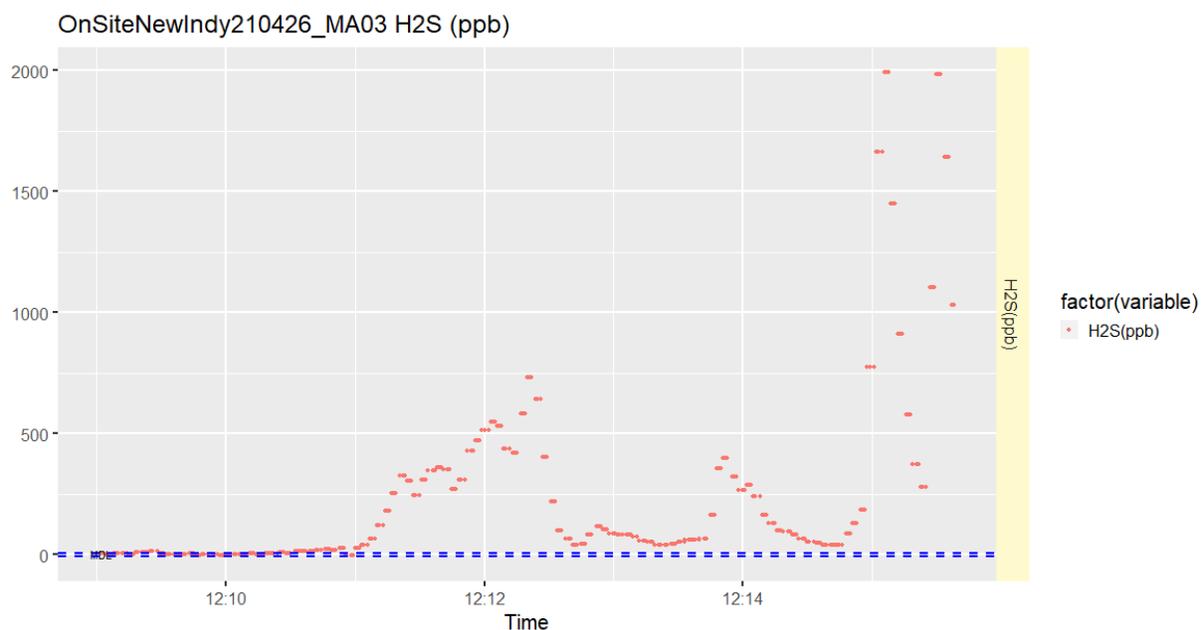


Figure 69: H₂S mobile transect timeseries on-site of New Indy – 210426MA03

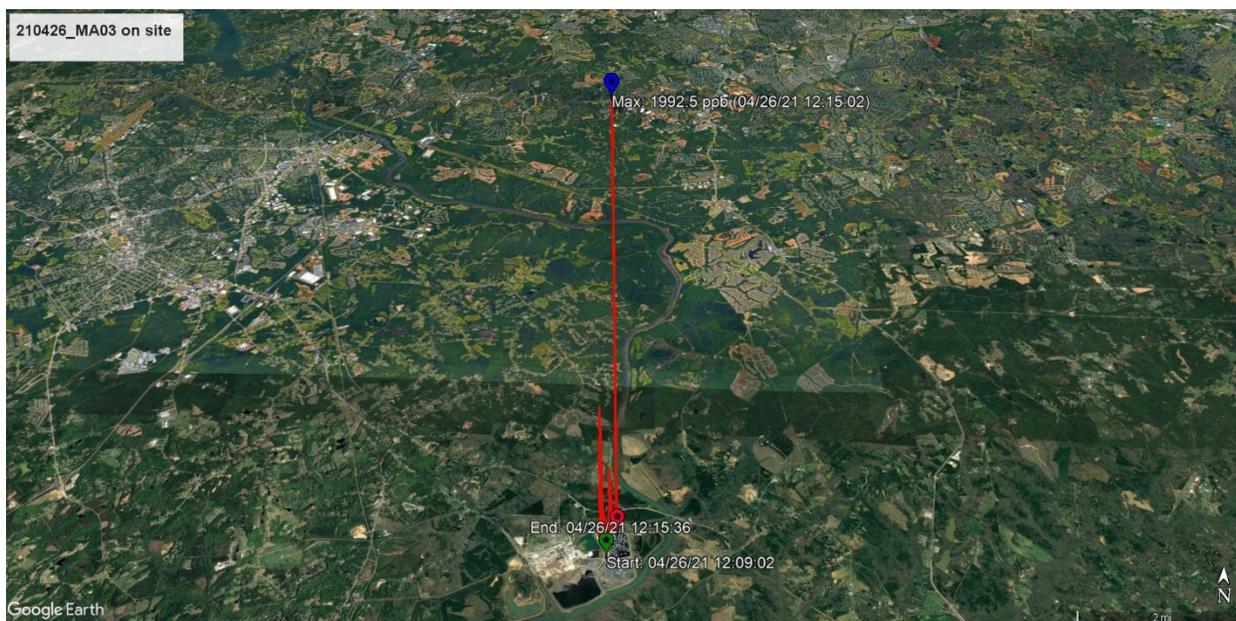


Figure 70: H₂S mobile transect ribbon on-site of New Indy – 210426_MA03

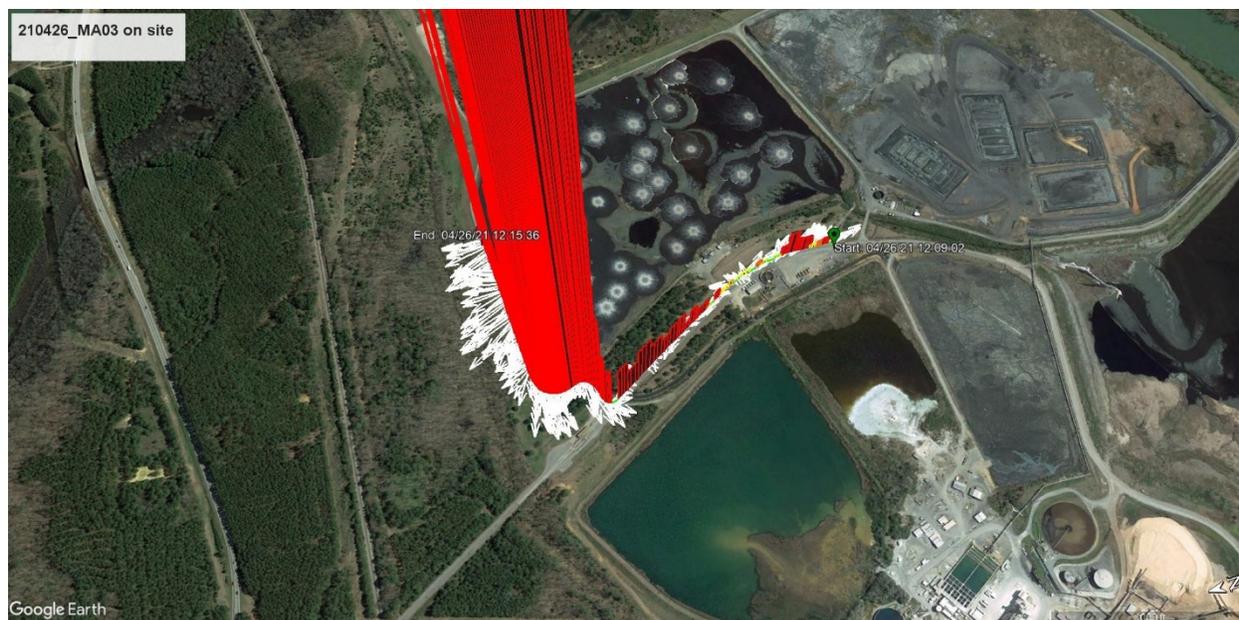


Figure 71: H₂S mobile transect ribbon on-site of New Indy – 210426_MA03 (same transect as figure 70, rotated)

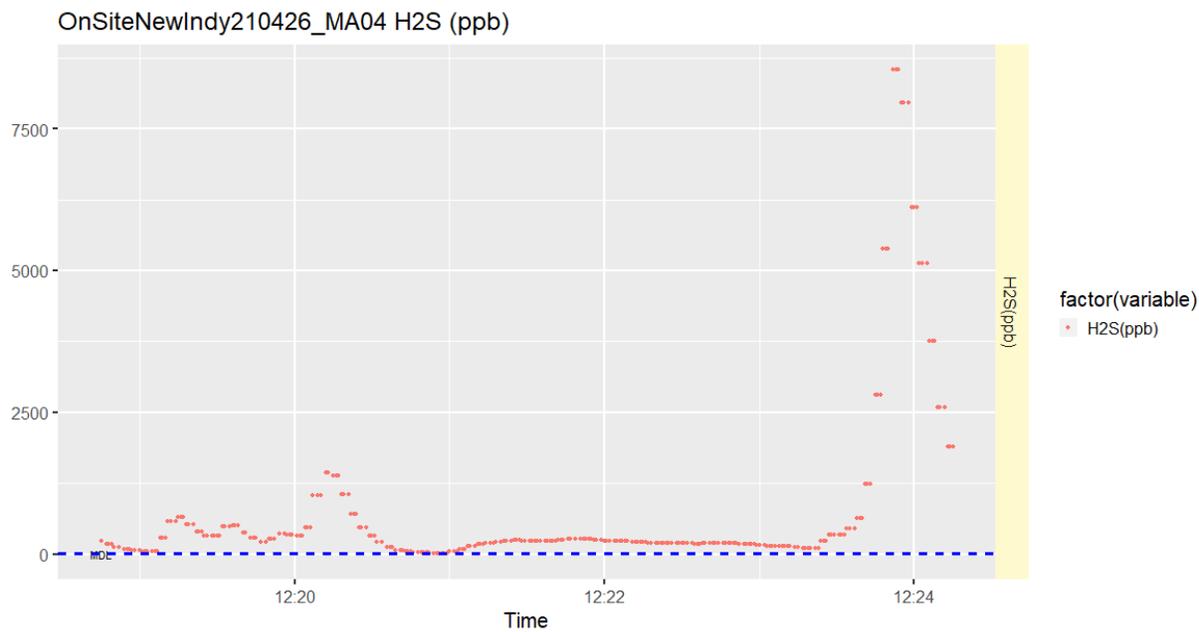


Figure 72: H₂S mobile transect timeseries on-site of New Indy – 210426MA04

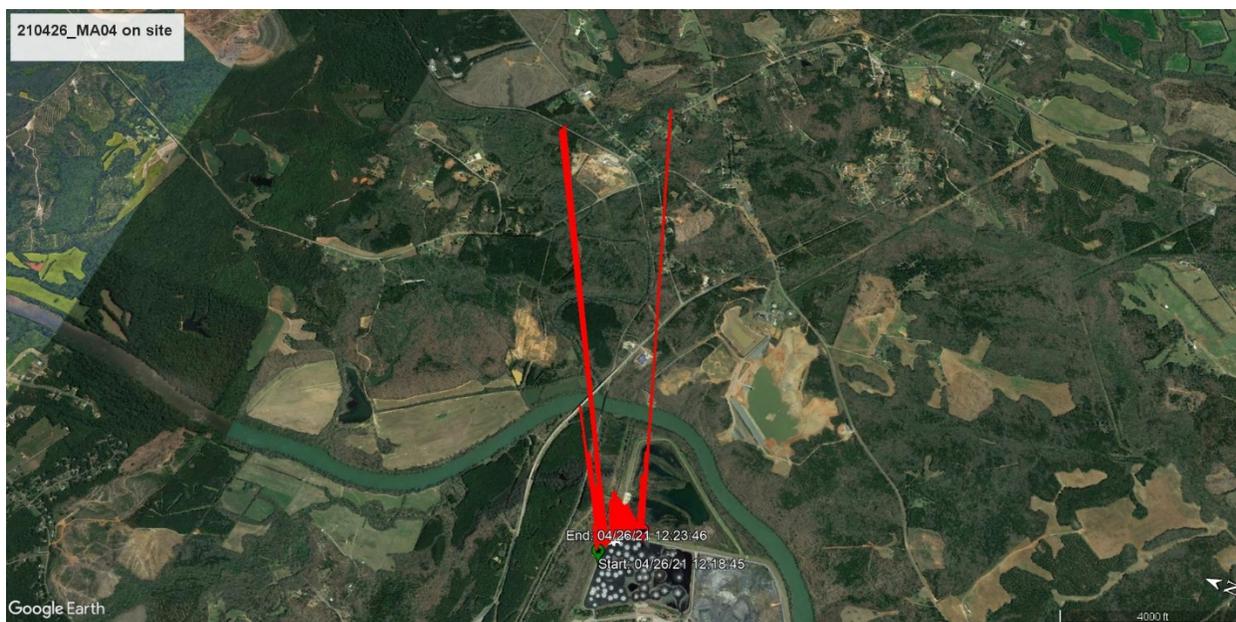


Figure 73: H₂S mobile transect ribbon on-site of New Indy – 210426_MA04

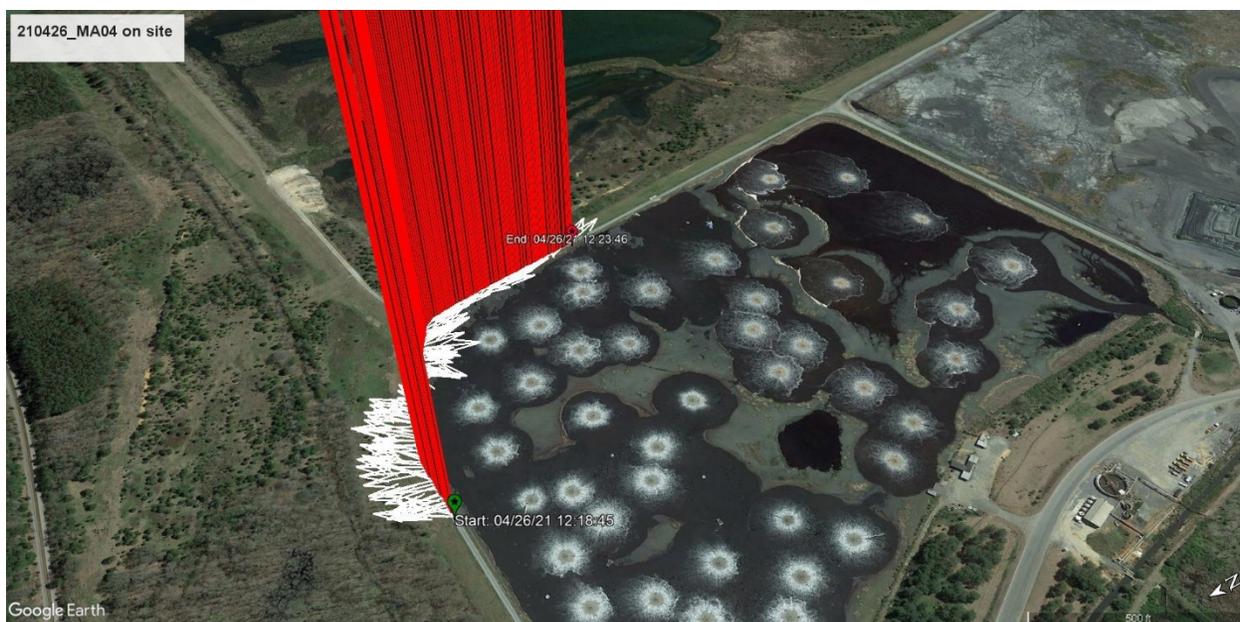


Figure 74: H₂S mobile transect ribbon on-site of New Indy – 210426_MA04 (Figure 73 – inset)

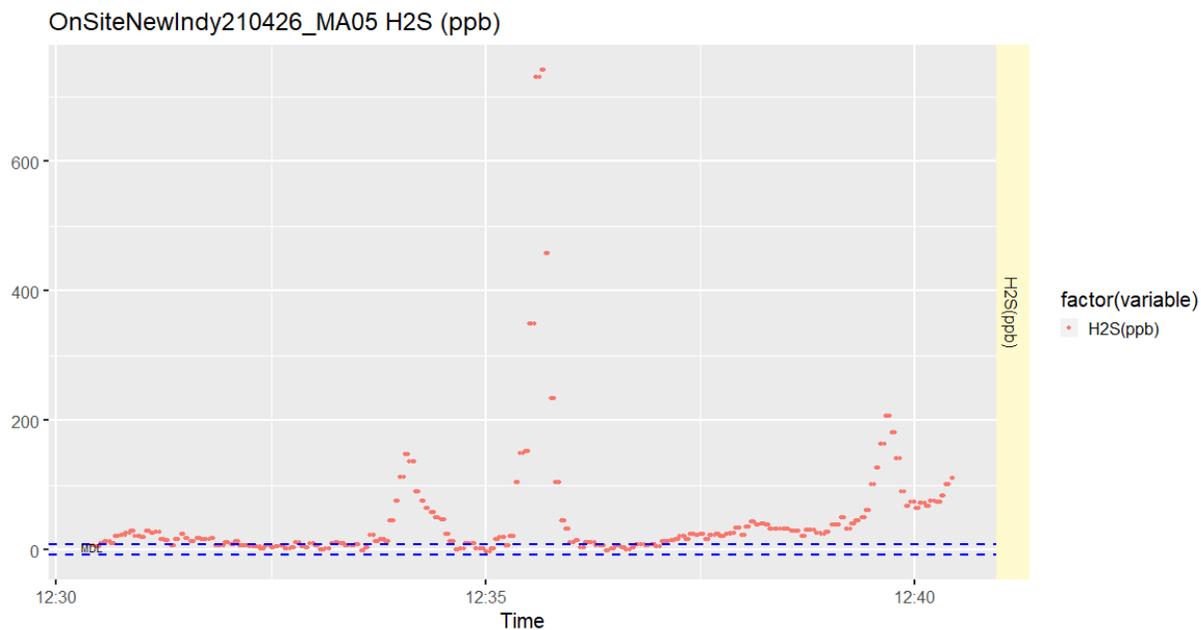


Figure 75: H₂S mobile transect timeseries on-site of New Indy – 210426MA05

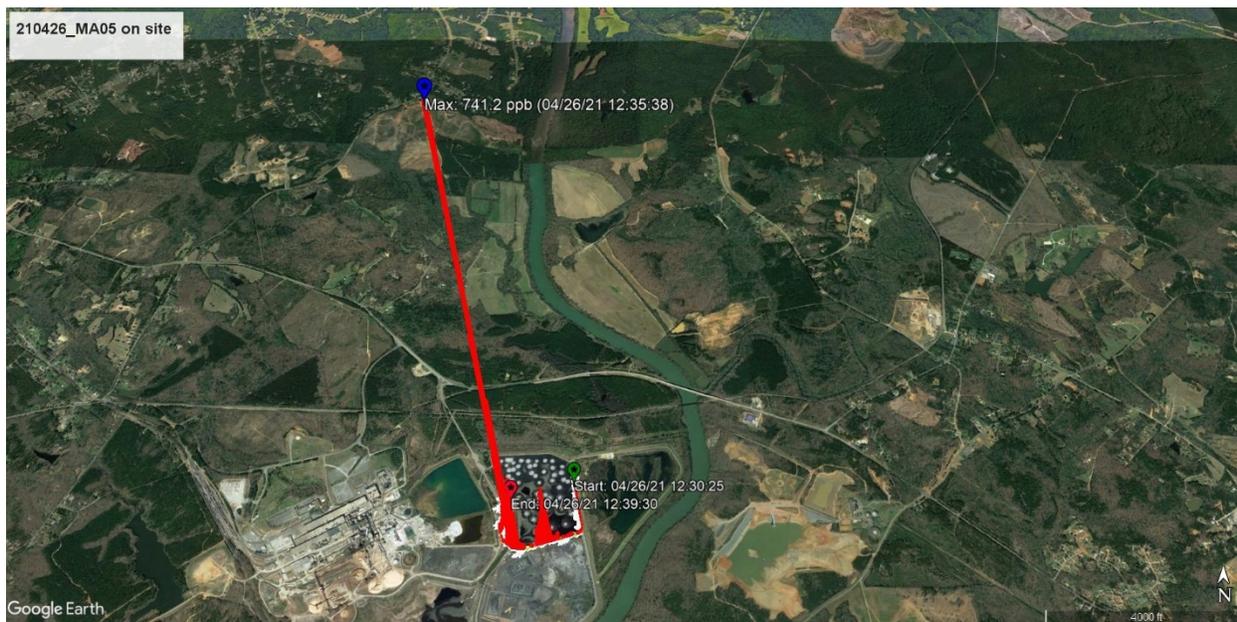


Figure 76: H₂S mobile transect ribbon on-site of New Indy – 210426_MA05

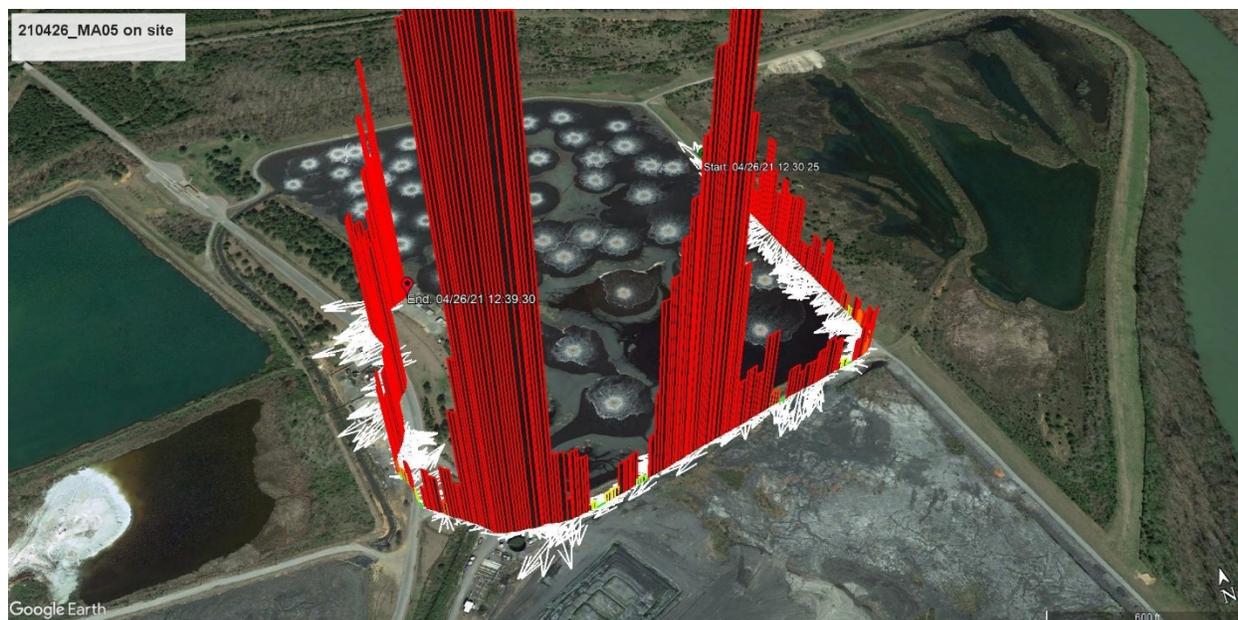


Figure 77: H₂S mobile transect ribbon on-site of New Indy – 210426_MA05 (Figure 76 – inset)

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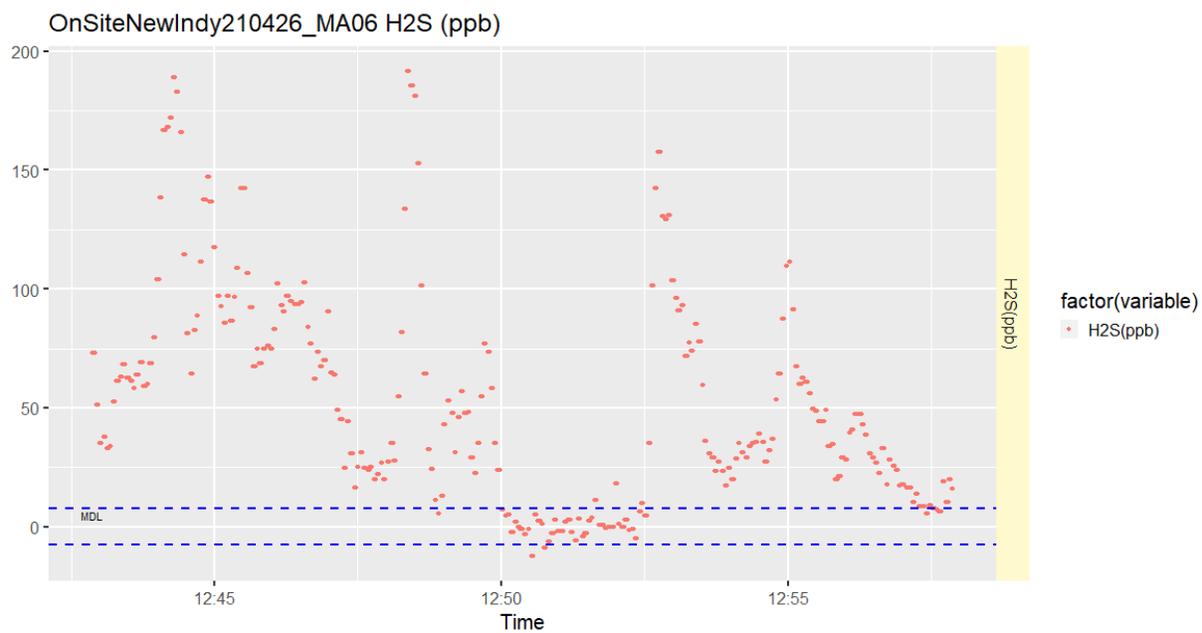


Figure 78: H₂S mobile transect timeseries on-site of New Indy – 210426MA06

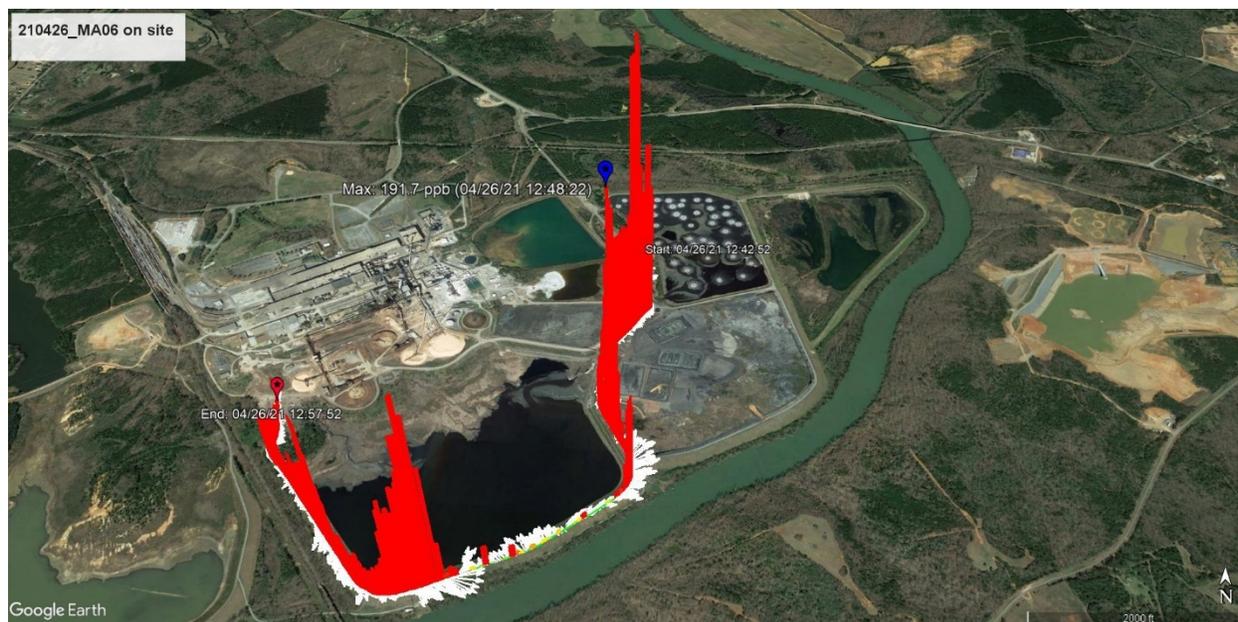


Figure 79: H₂S mobile transect timeseries on-site of New Indy – 210426MA06

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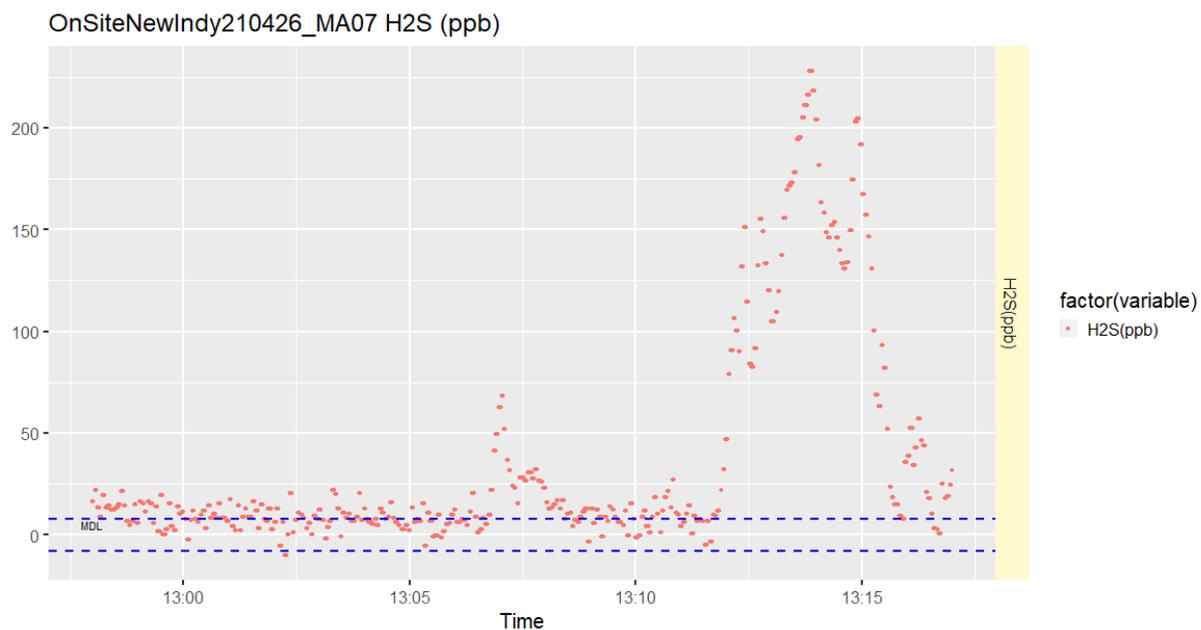


Figure 80: H₂S mobile transect timeseries on-site of New Indy – 210426MA07



Figure 81: H₂S mobile transect ribbon on-site of New Indy – 210426_MA07

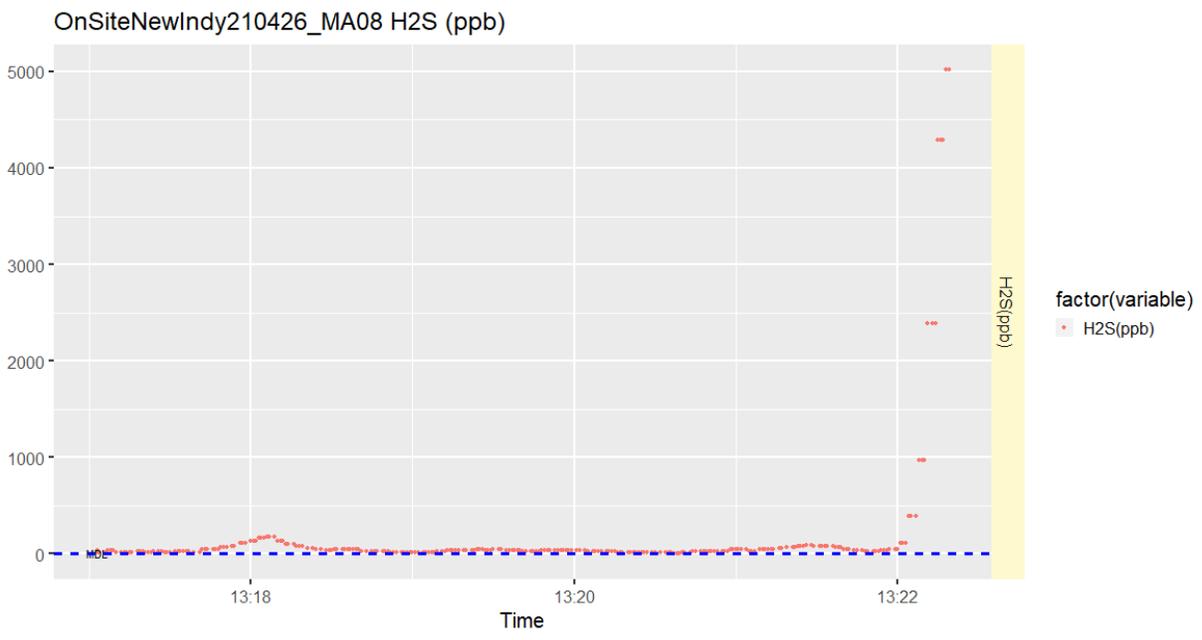


Figure 82: H₂S mobile transect timeseries on-site of New Indy – 210426MA08

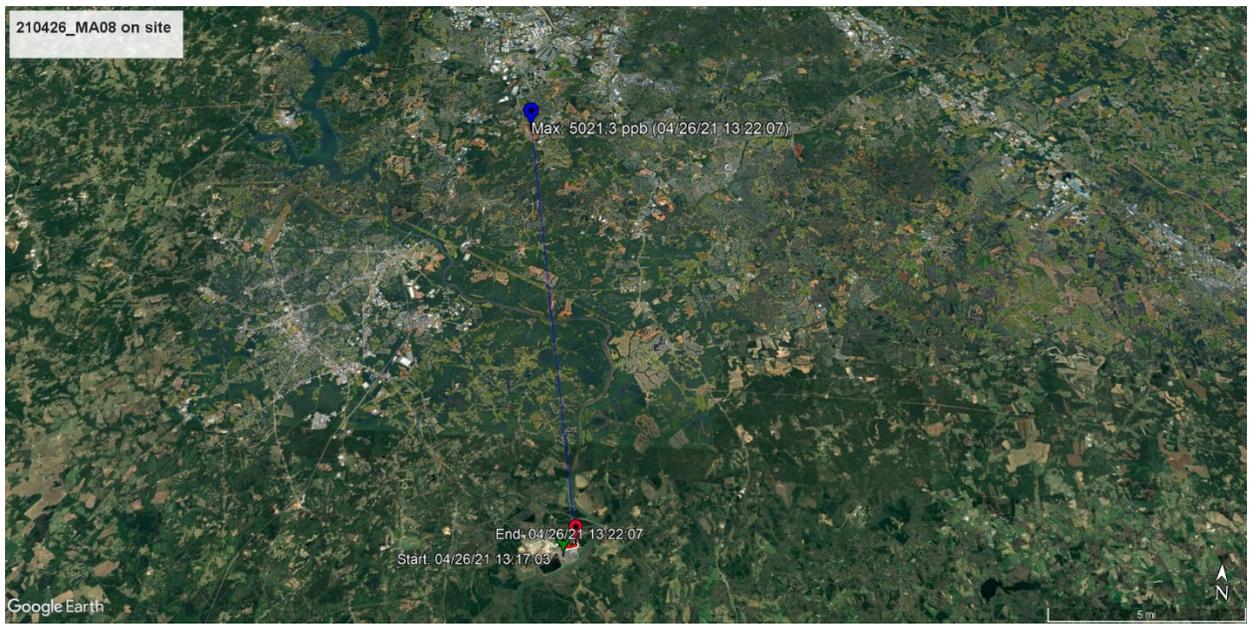


Figure 83: H₂S mobile transect ribbon on-site of New Indy – 210426_MA08

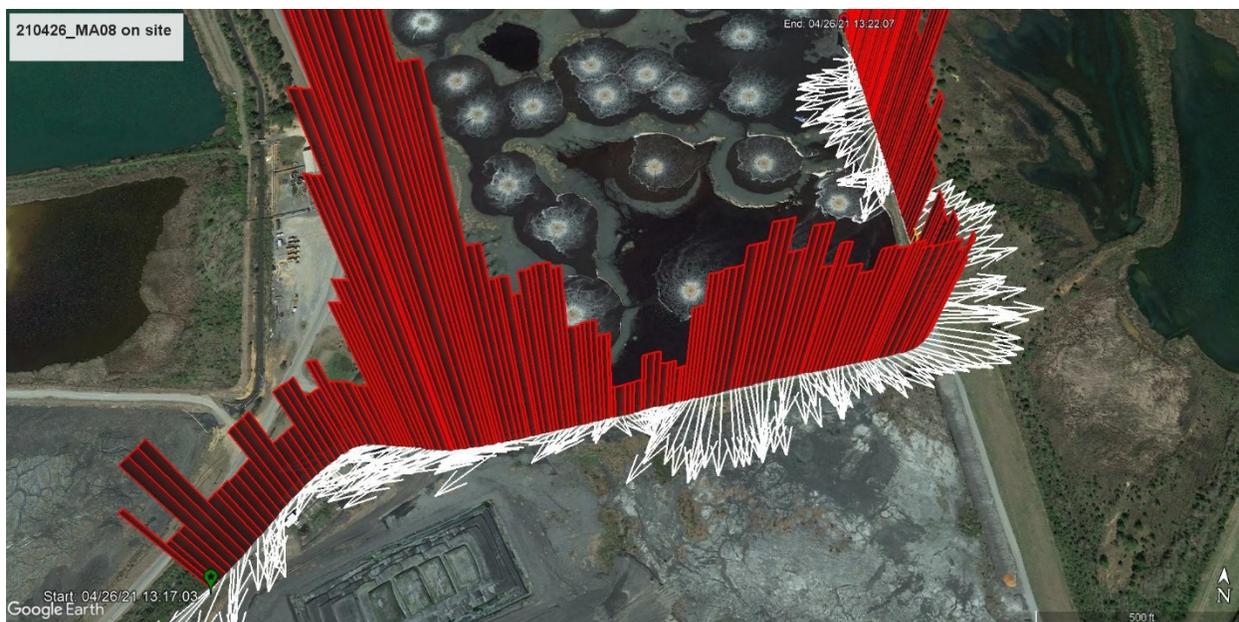


Figure 84: H₂S mobile transect ribbon on-site of New Indy – 210426_MA08 (Figure 83 – inset)

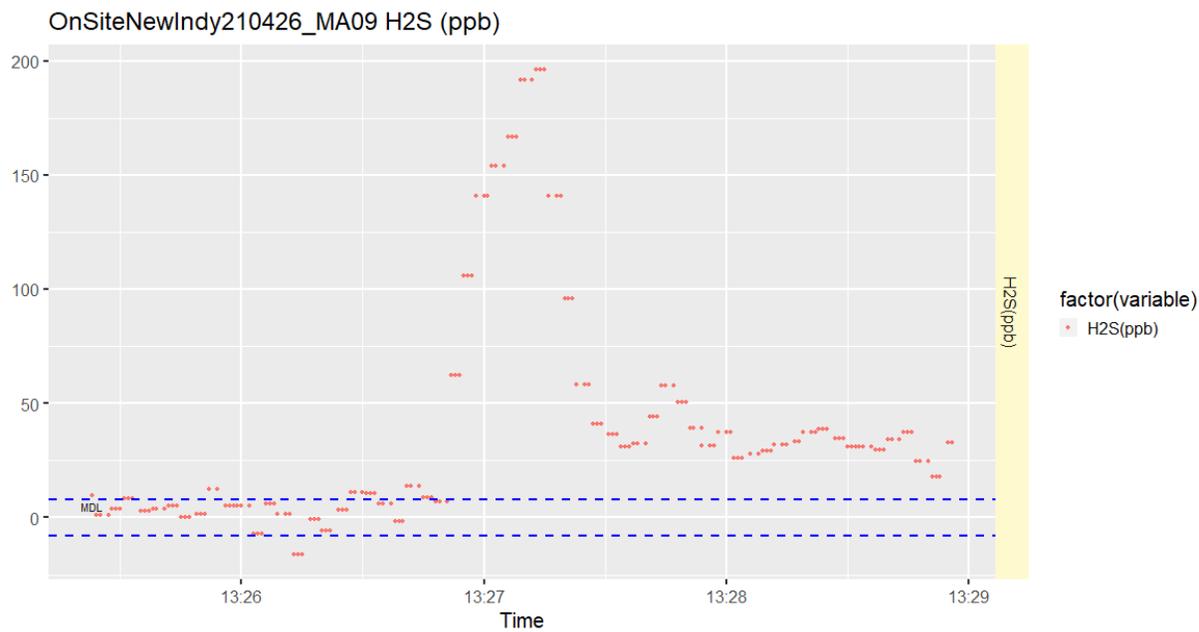


Figure 85: H₂S mobile transect timeseries on-site of New Indy – 210426MA09

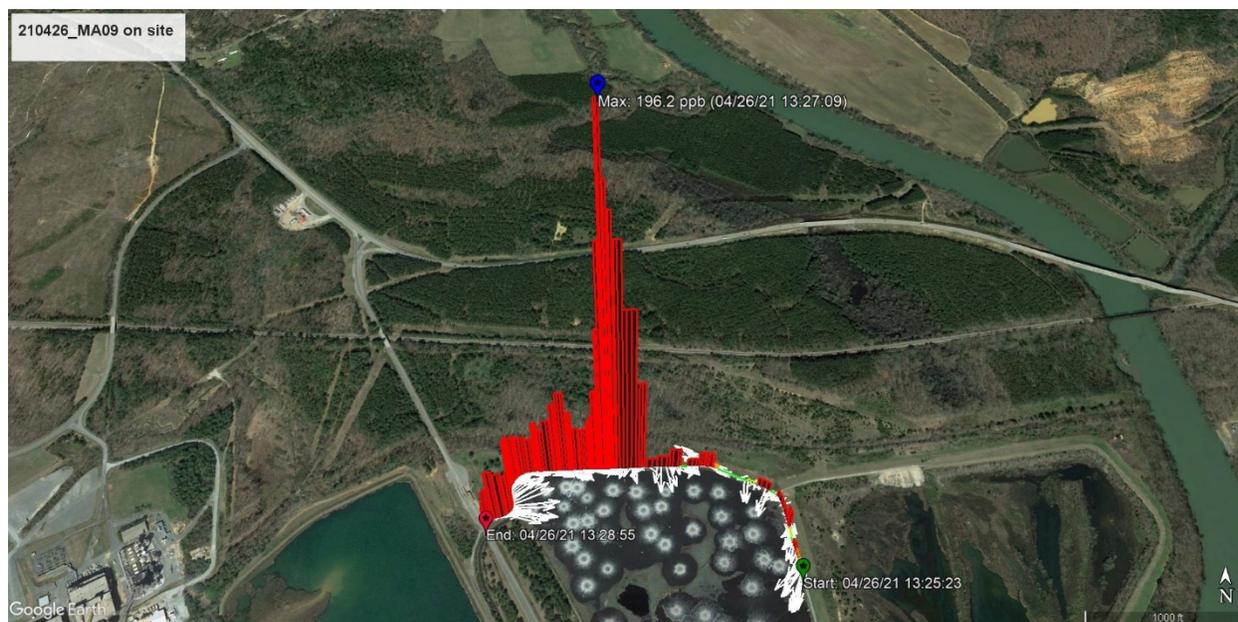


Figure 86: H₂S mobile transect ribbon on-site of New Indy – 210426_MA09

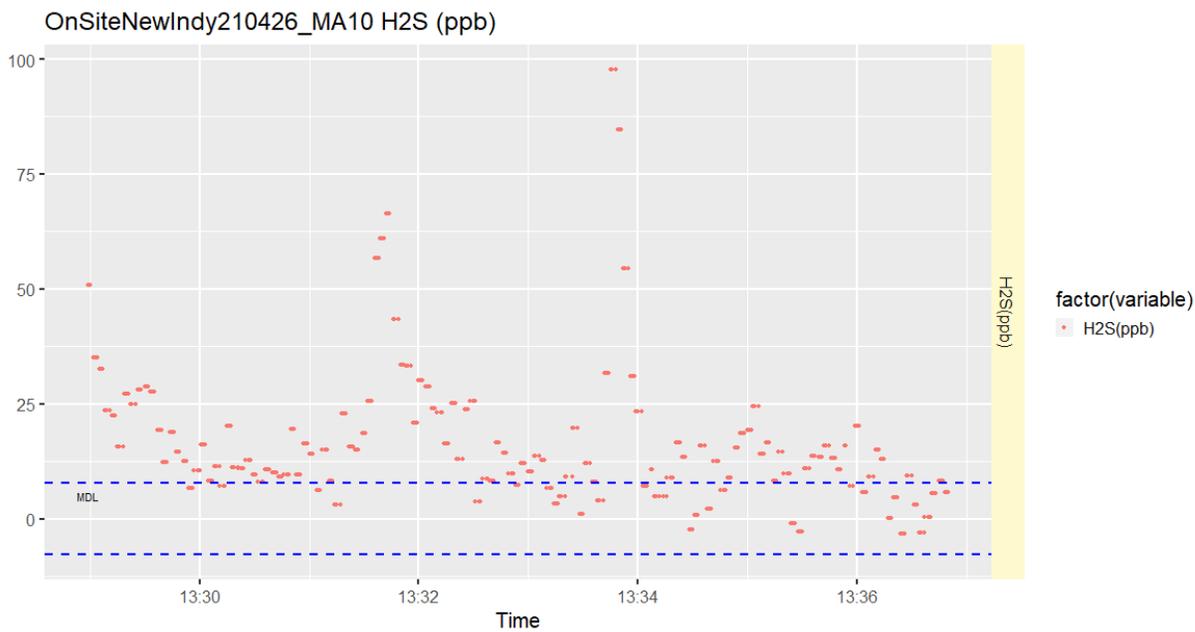


Figure 87: H₂S mobile transect timeseries on-site of New Indy – 210426MA10



Figure 88: H₂S mobile transect ribbon on-site of New Indy – 210426_MA10

Stationary GMAP measurements on-site at New Indy – April 26, 2021

STATIONARY MEASUREMENTS – APRIL 26, 2021 ON-SITE	H₂S (PPB)		
ATSDR ACUTE (≤14 DAY) MRL	70		
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20		
ATSDR CHRONIC (≥365 DAYS) MRL	-		
GMAP MDL	7.86		
	max 1-sec conc	duration	avg H ₂ S (ppb)
210426_ST01	66.64	129 min	6.73

Table 13: Maximum one-second concentrations from stationary measurements on-site New Indy - April 26, 2021

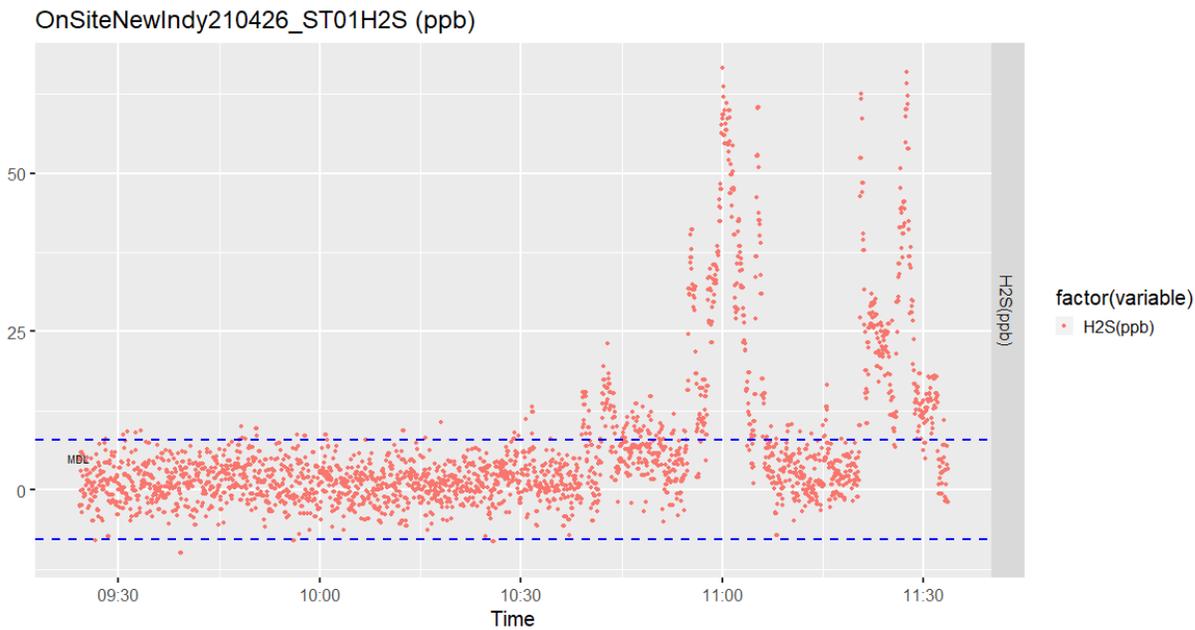


Figure 89: H₂S stationary timeseries parking lot of New Indy – 210426_ST01

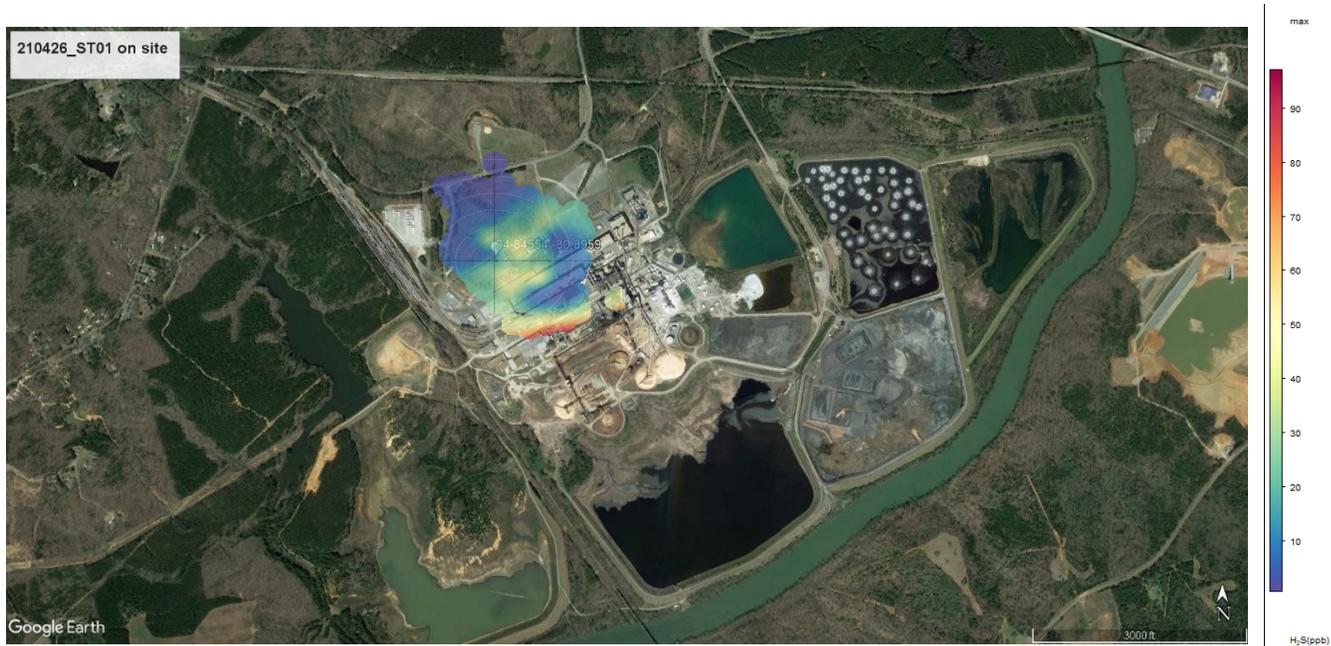


Figure 90: H₂S stationary Polar Plot parking lot of New Indy – 210426_ST01

Mobile GMAP measurements – April 27, 2021

	H₂S (PPB)
ATSDR ACUTE (≤14 DAY) MRL	70
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20
ATSDR CHRONIC (≥365 DAYS) MRL	-
GMAP MDL	7.86
	max 1-sec conc
*210427_MA01	407.66
*210427_MA02	79.50
*210427_MA03	396.62
*210427_MA04	477.47
*210427_MA05	453.95
*210427_MA06	375.17
210427_MA07	14.39
210427_MA08	29.96
*210427_MA09	122.50
*210427_MA10	124.26
*210427_MA11	124.52
*210427_MA12	108.09
*210427_MA13	407.56
210427_MA14	18.07
210427_MA15	18.16
210427_MA16	14.11
*210427_MA17	33.62
*210427_MA18	43.64
210427_MA19	48.45
*210427_MA20	40.30
*210427_MA21	33.11
210427_MA22	31.29
210427_MA23	10.46
210427_MA24	10.90

Table 14: Maximum one-second concentrations from mobile measurements - April 27, 2021

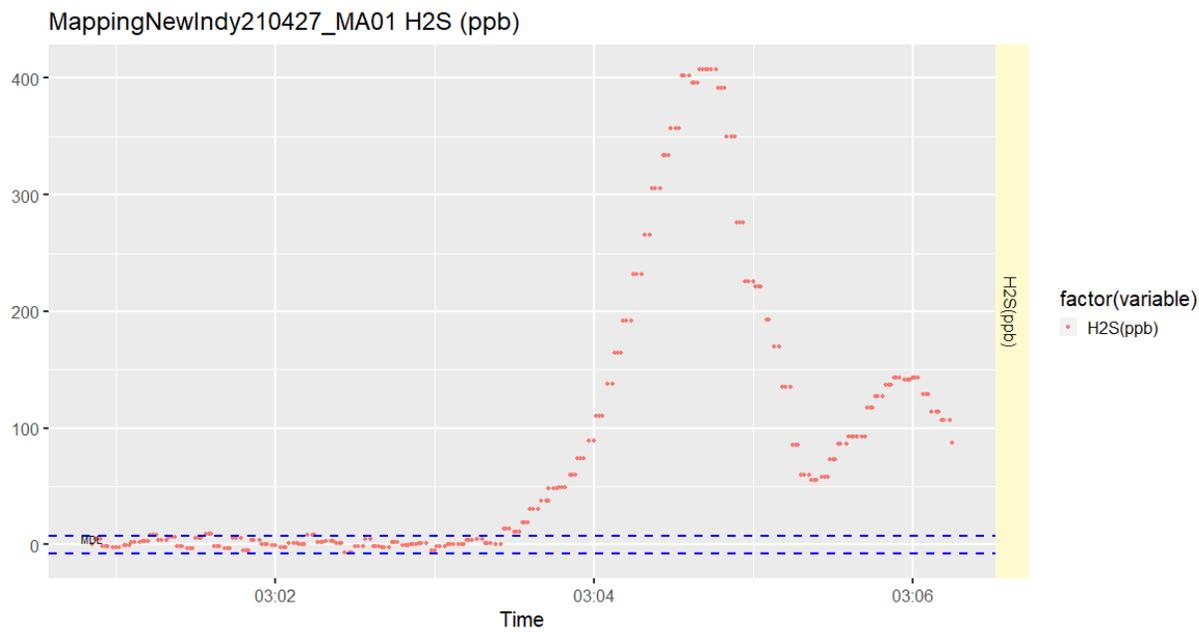


Figure 91: H₂S mobile transect timeseries – 210427MA01

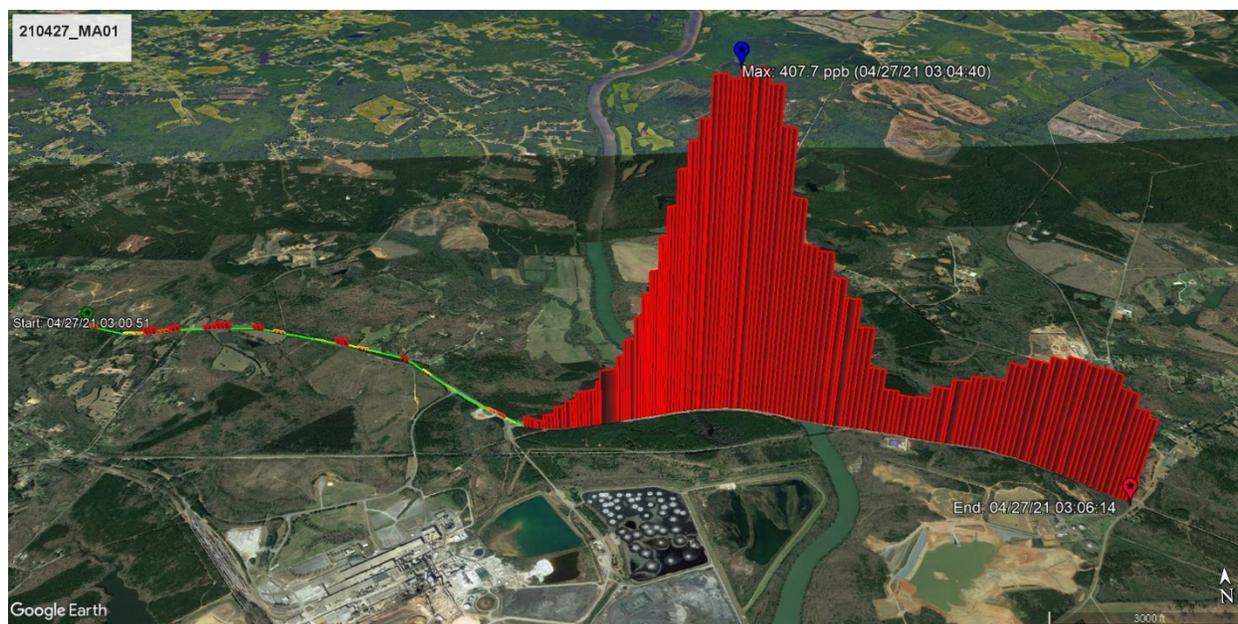


Figure 92: H₂S mobile transect ribbon – 210427_MA01

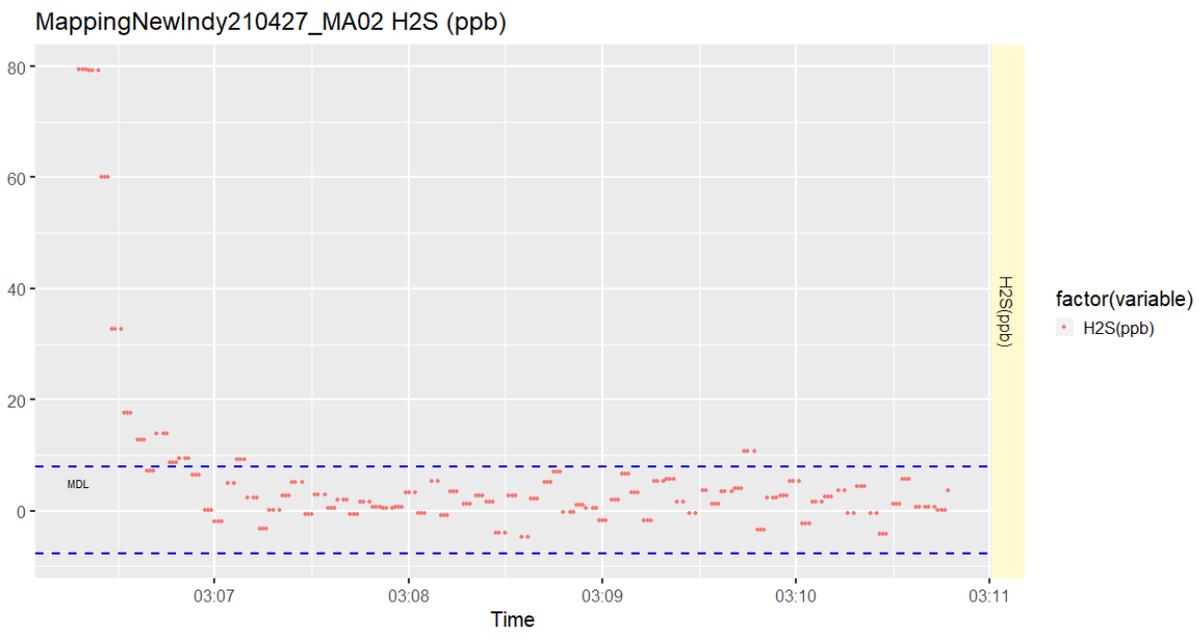


Figure 93: H₂S mobile transect timeseries – 210427MA02



Figure 94: H₂S mobile transect ribbon – 210427_MA02

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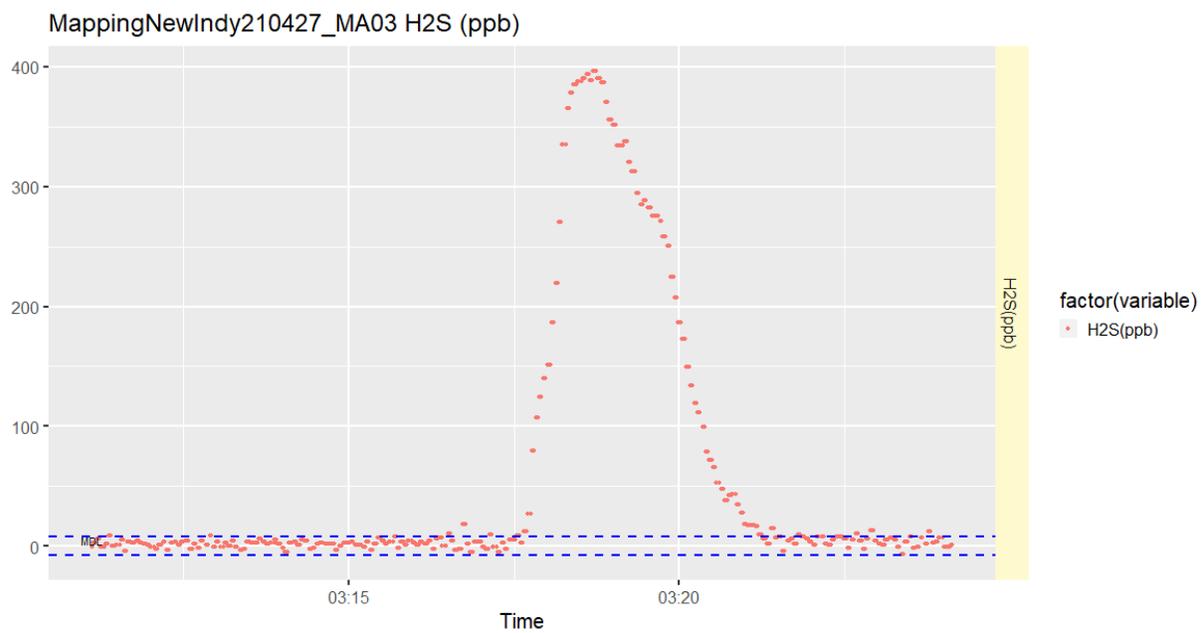


Figure 95: H₂S mobile transect timeseries – 210427MA03

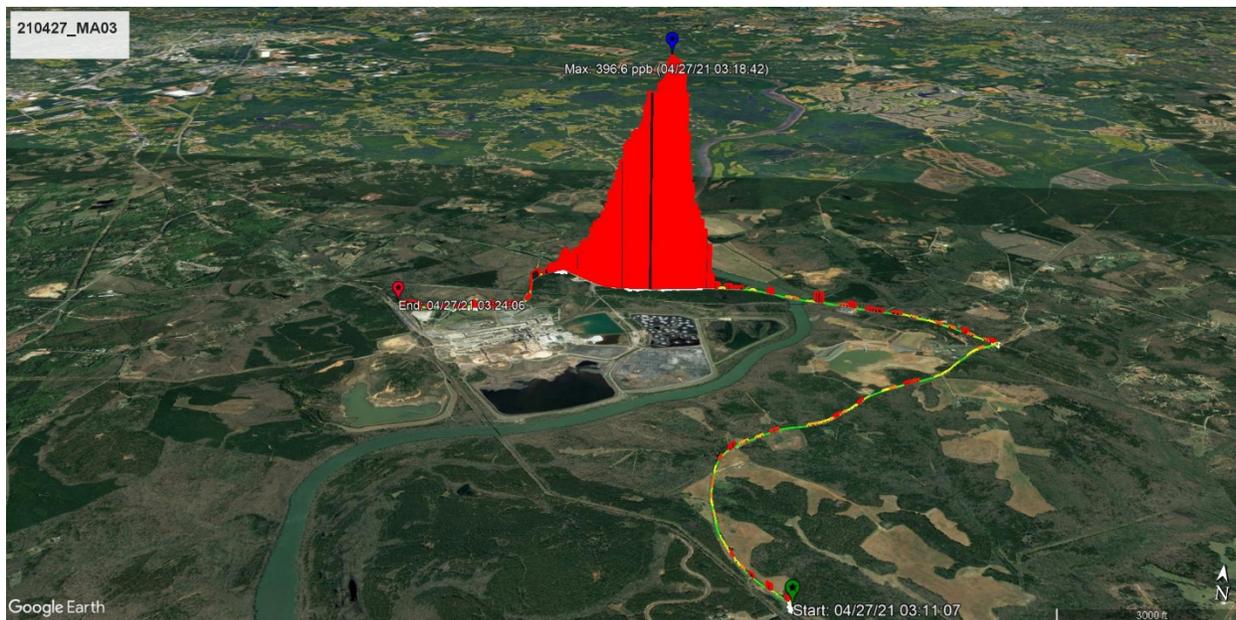


Figure 96: H₂S mobile transect ribbon – 210427_MA03

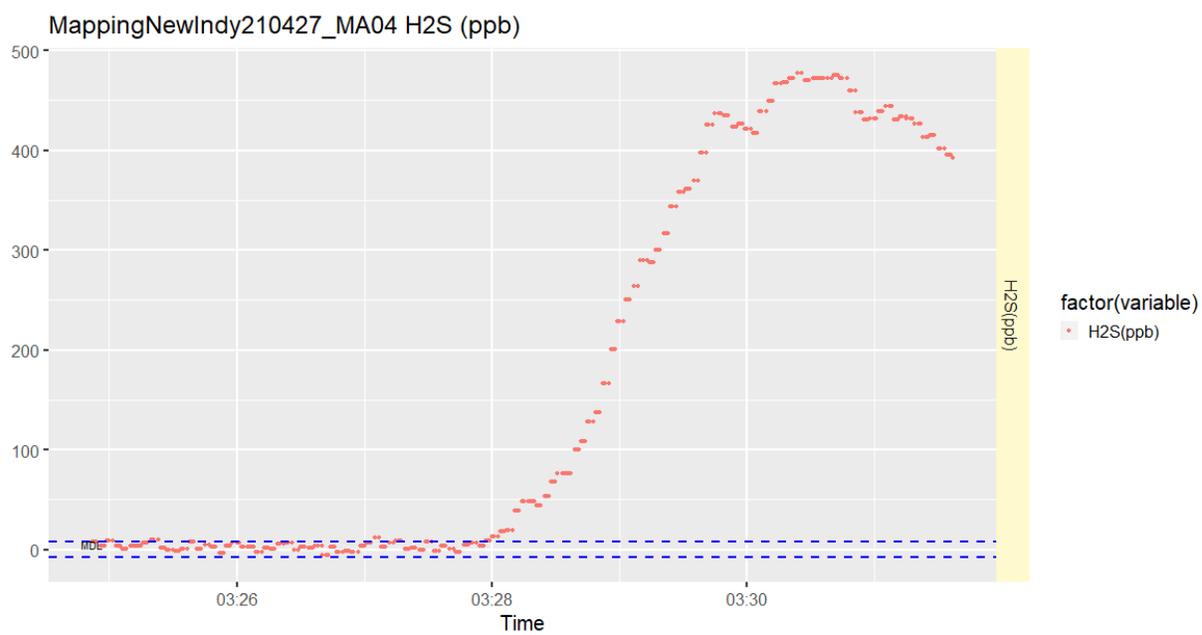


Figure 97: H₂S mobile transect timeseries – 210427MA04

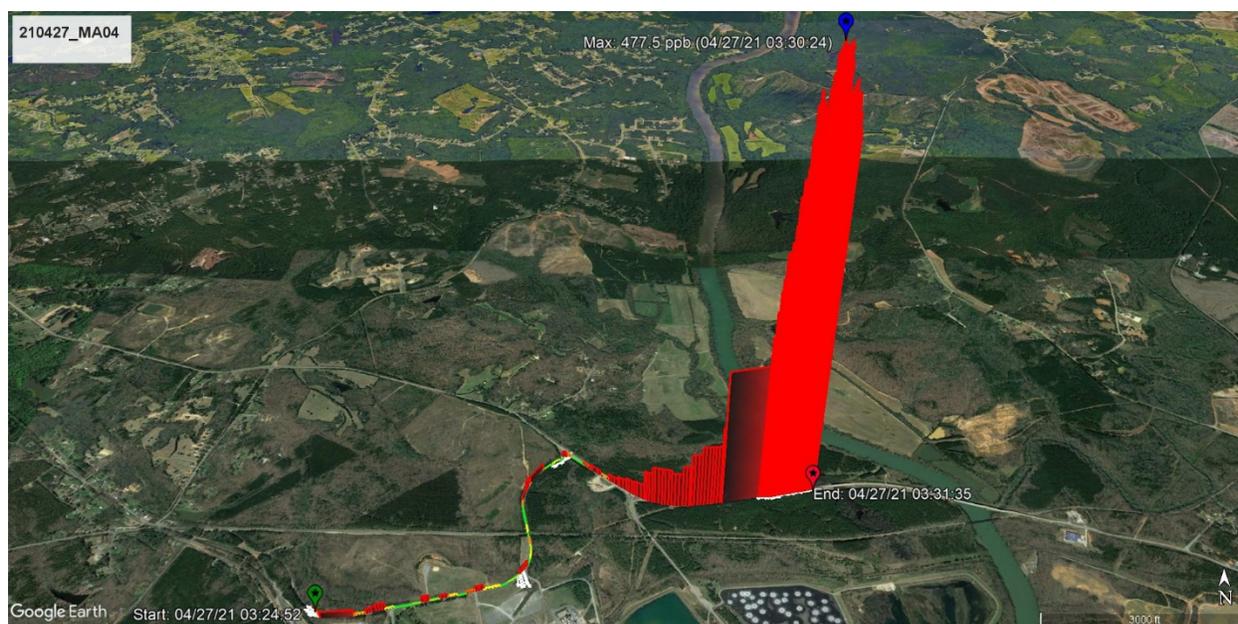


Figure 98: H₂S mobile transect ribbon – 210427_MA04

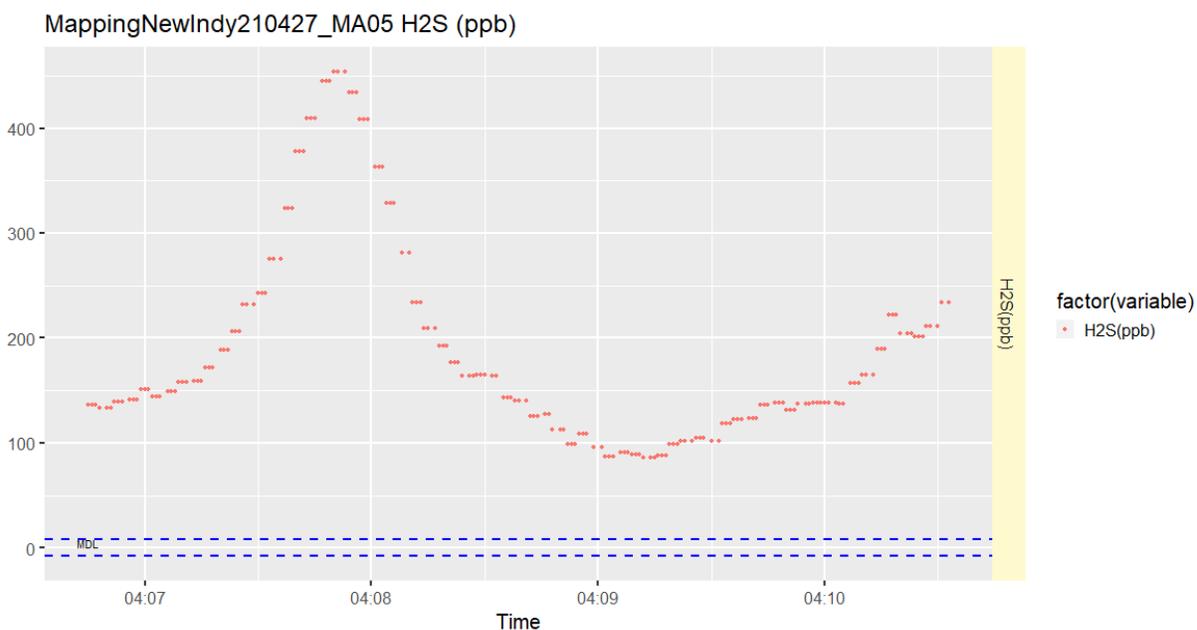


Figure 99: H₂S mobile transect timeseries – 210427MA05

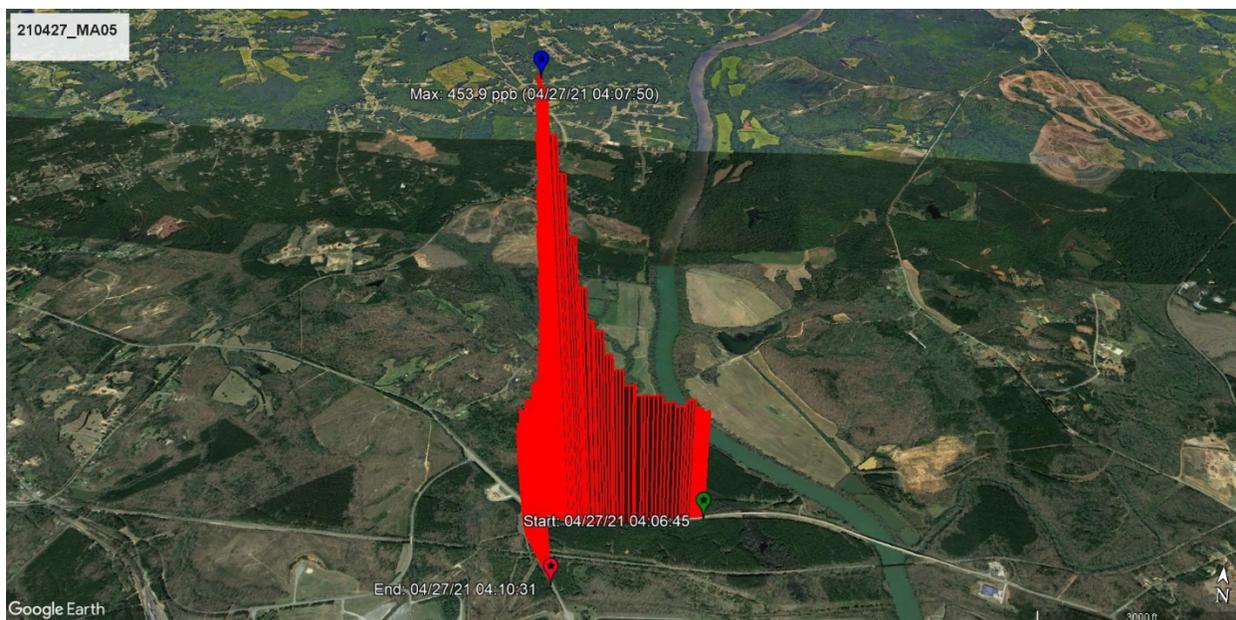


Figure 100: H₂S mobile transect ribbon – 210427_MA05

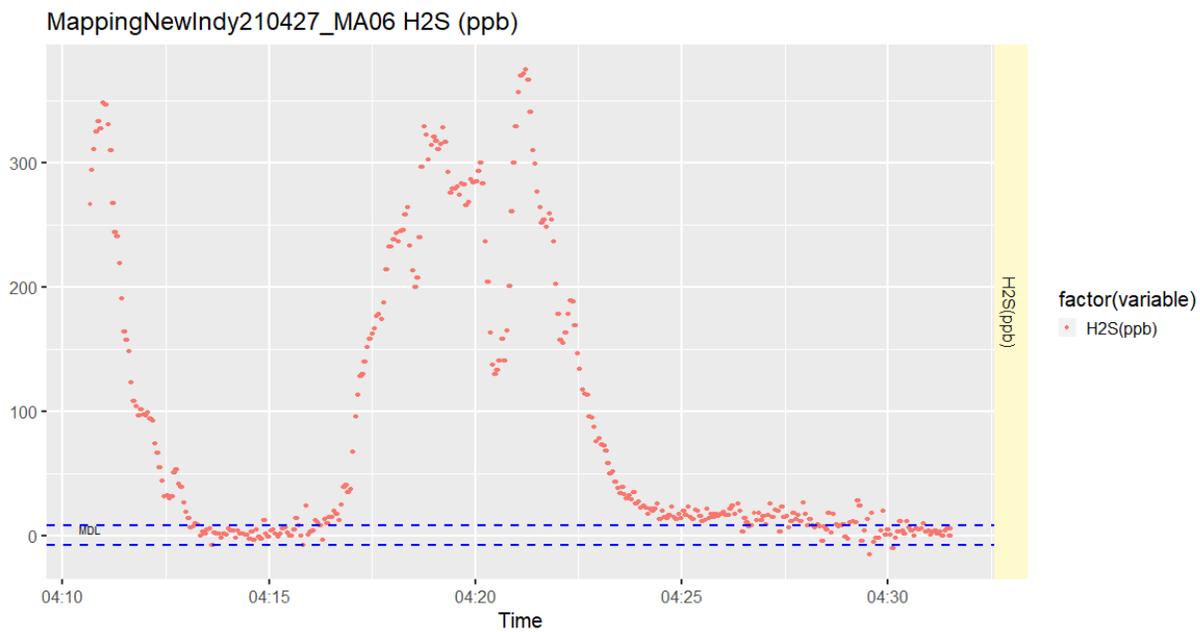


Figure 101: H₂S mobile transect timeseries – 210427MA06

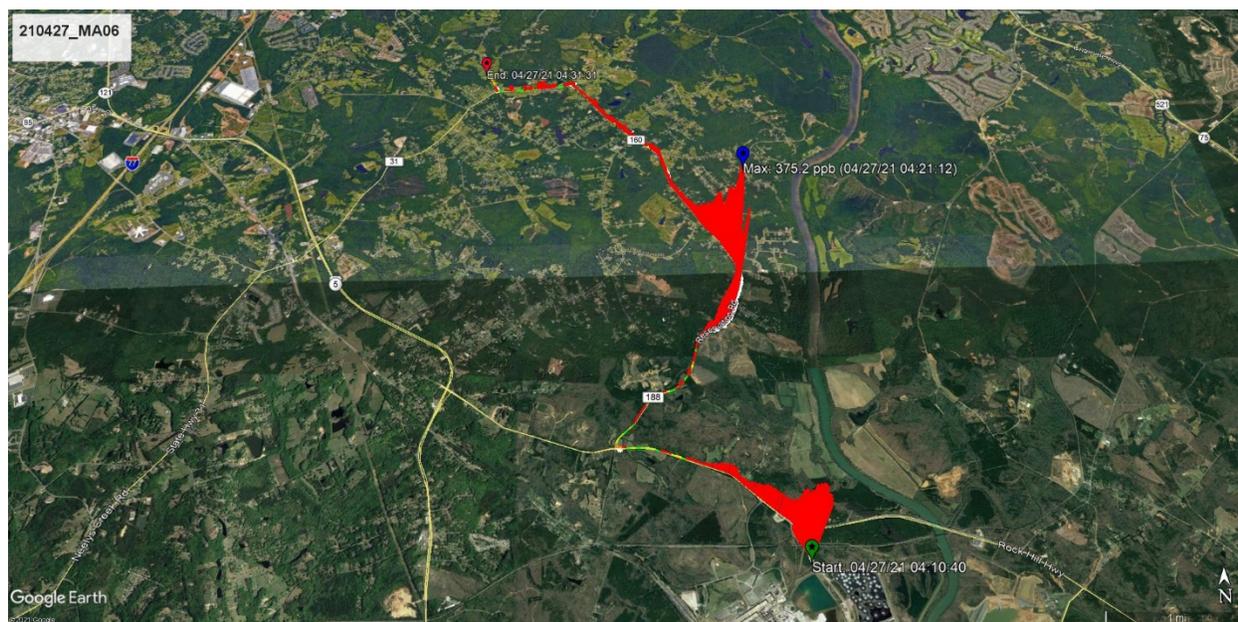


Figure 102: H₂S mobile transect ribbon – 210427_MA06

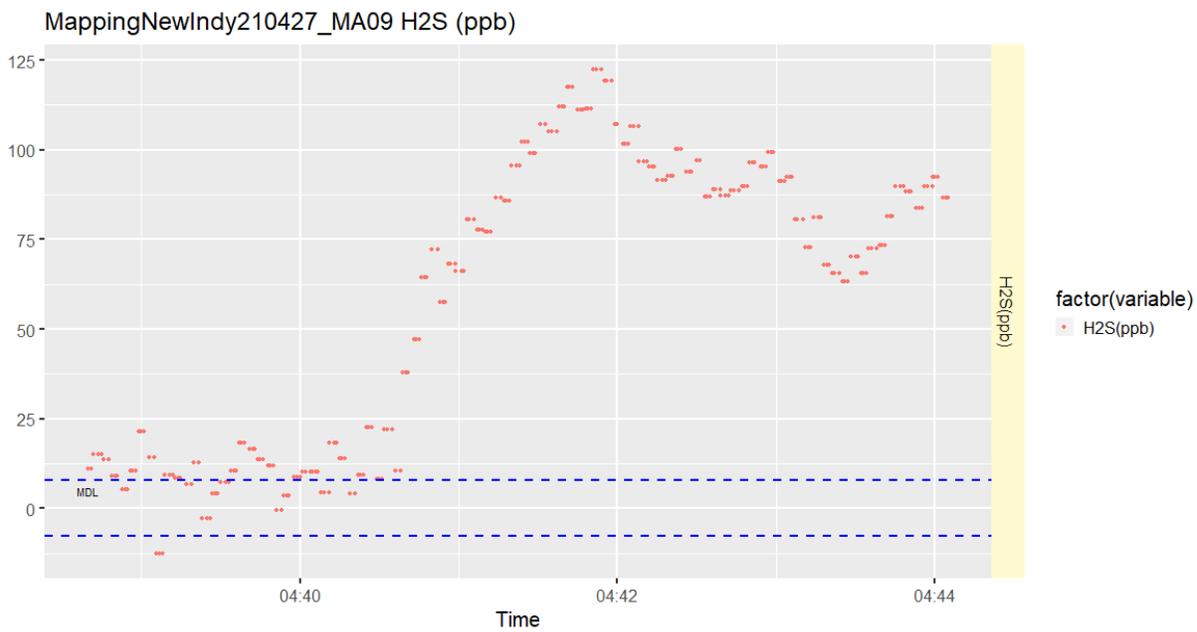


Figure 103: H₂S mobile transect timeseries – 210427MA09

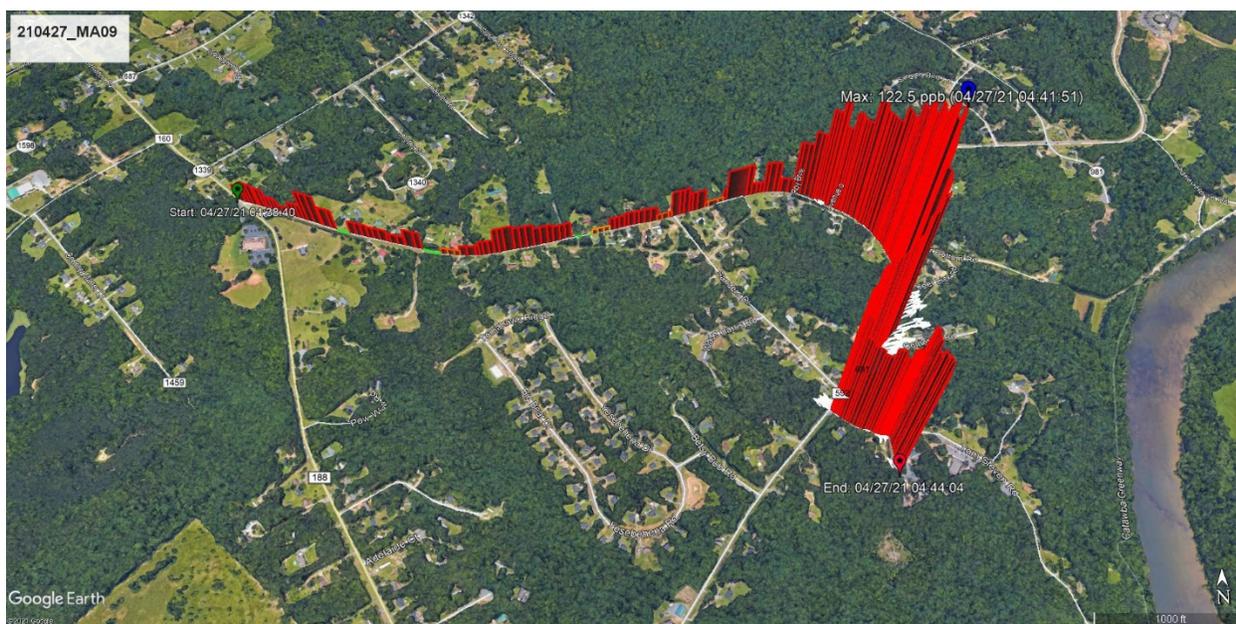


Figure 104: H₂S mobile transect ribbon – 210427_MA09

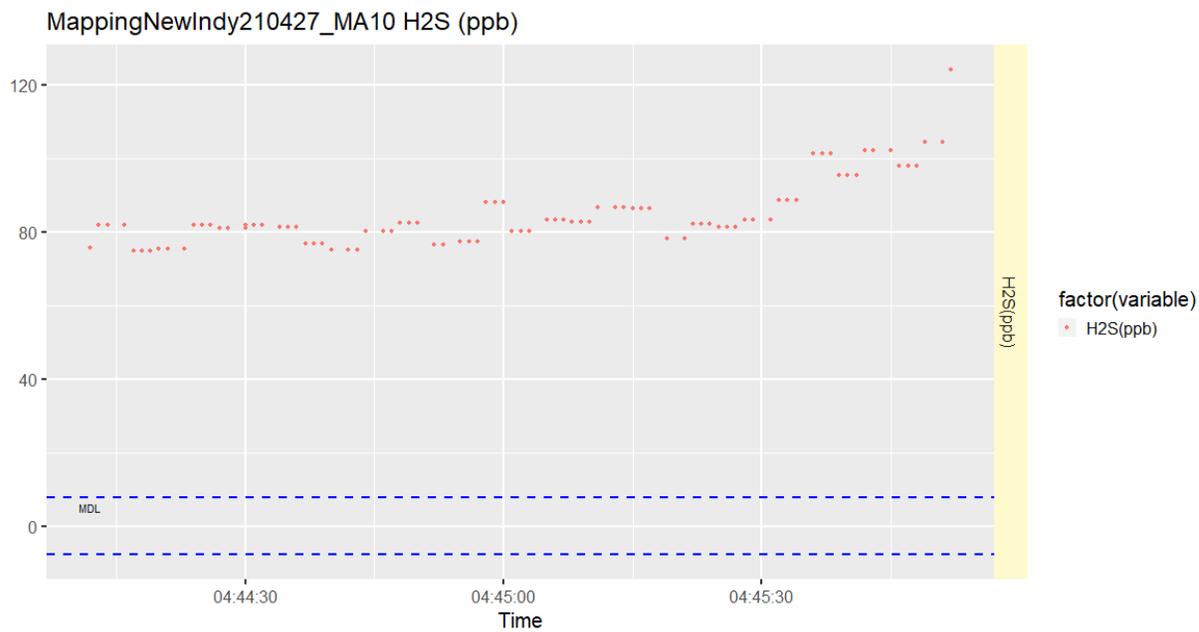


Figure 105: H₂S mobile transect timeseries – 210427MA10

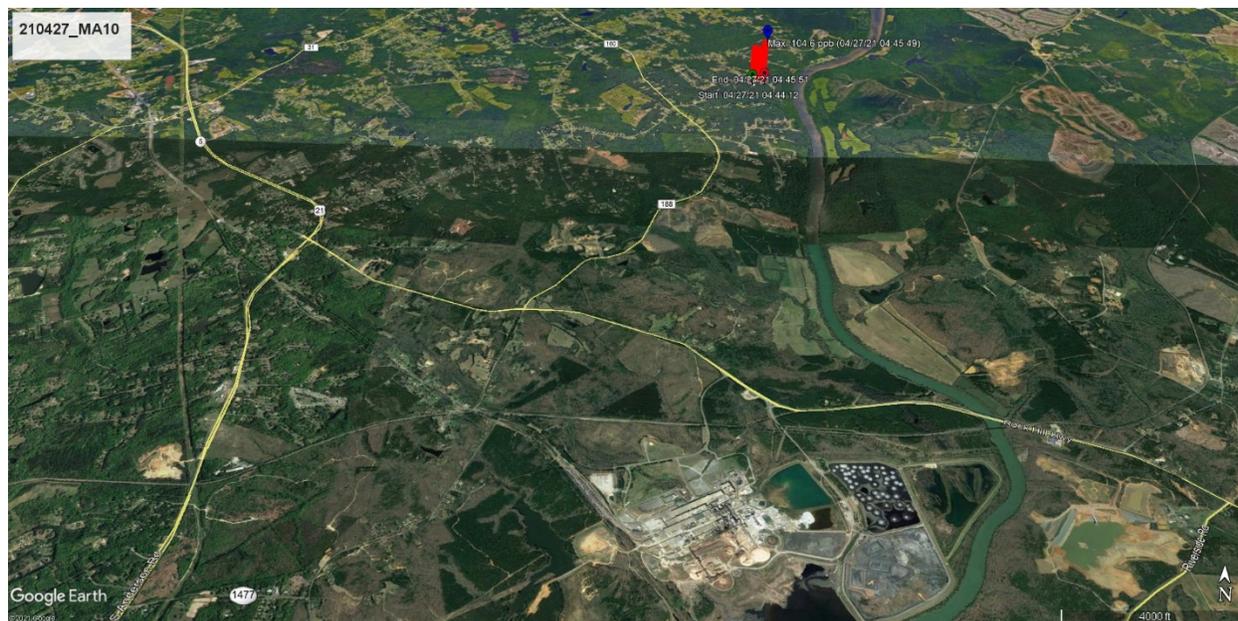


Figure 106: H₂S mobile transect ribbon – 210427_MA10

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Figure 107: H₂S mobile transect ribbon – 210427_MA10 (Figure 106 – inset)

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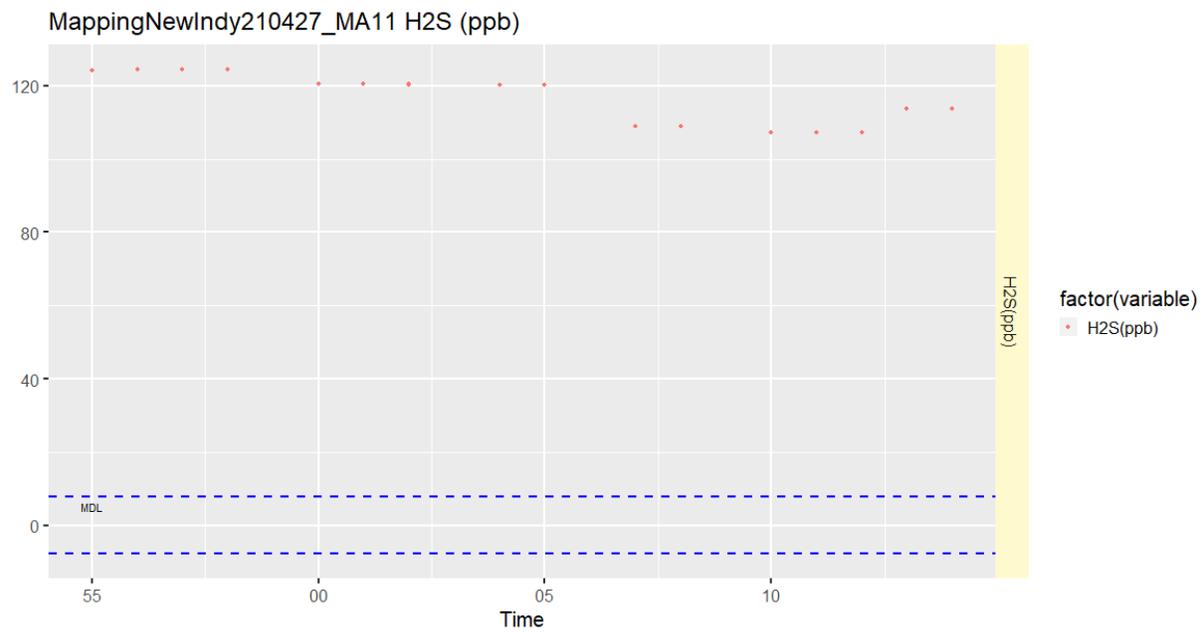


Figure 108: H₂S mobile transect timeseries – 210427MA11

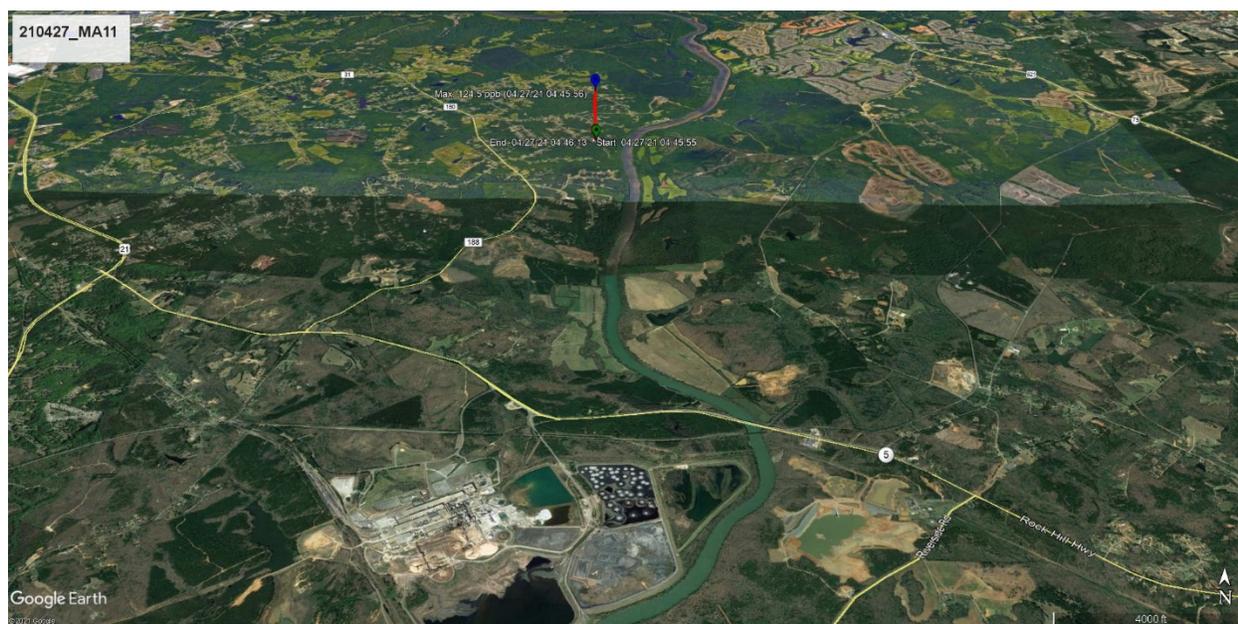


Figure 109: H₂S mobile transect ribbon – 210427_MA11

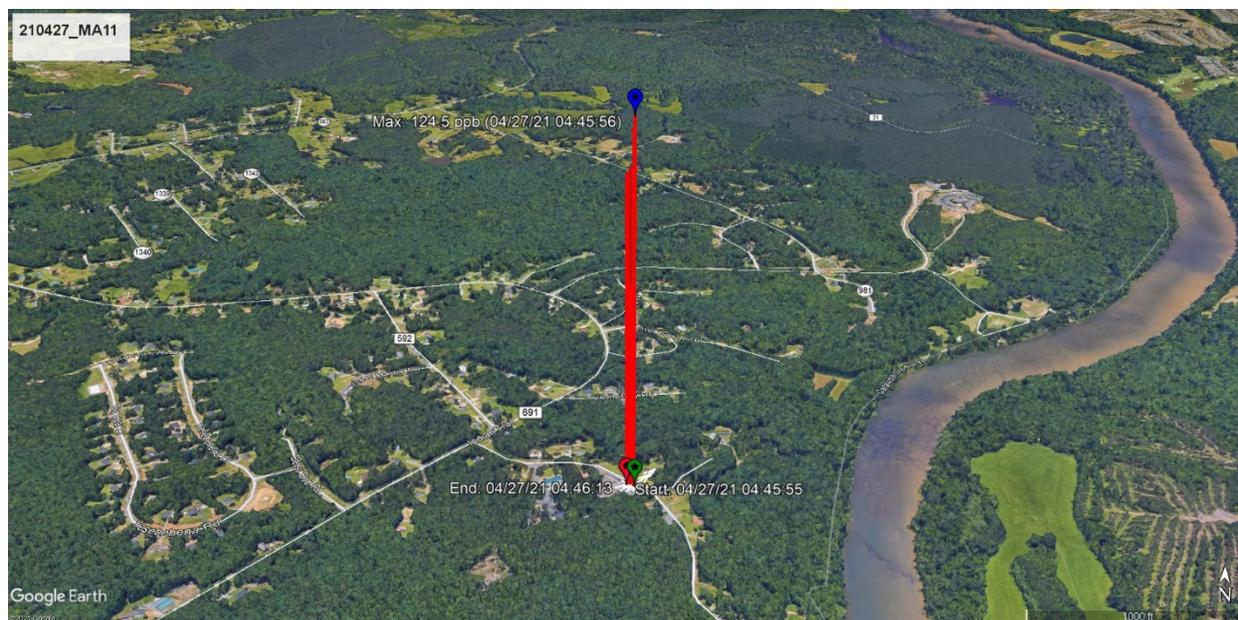


Figure 110: H₂S mobile transect ribbon – 210427_MA11 (Figure 109 inset)

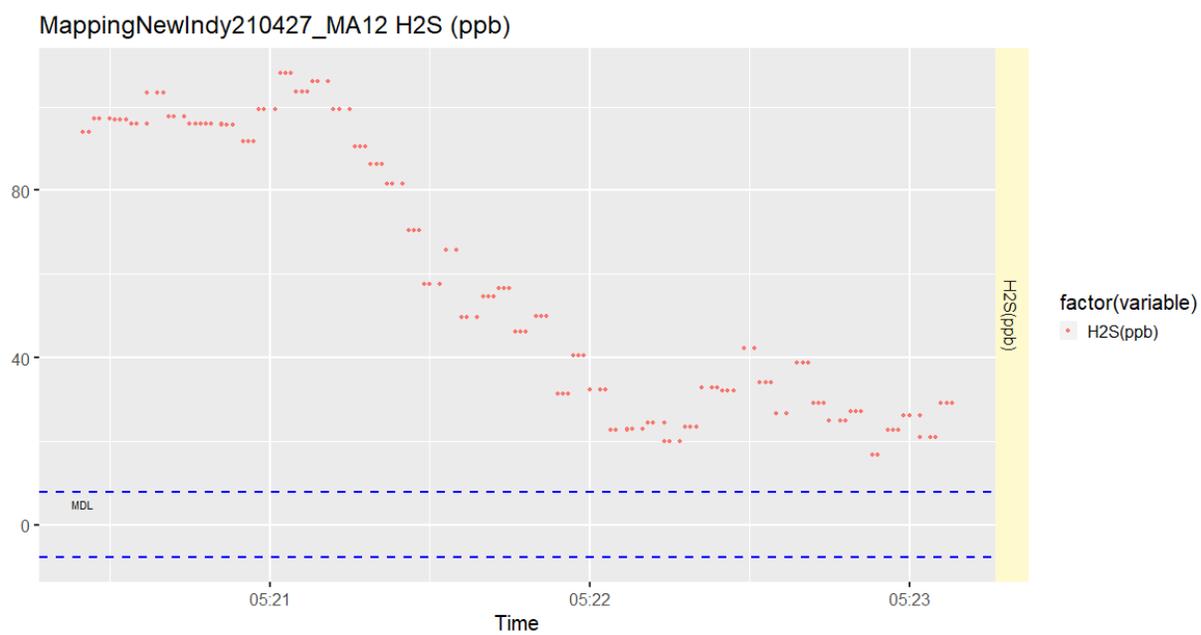


Figure 111: H₂S mobile transect timeseries – 210427MA12



Figure 112: H₂S mobile transect ribbon – 210427_MA12

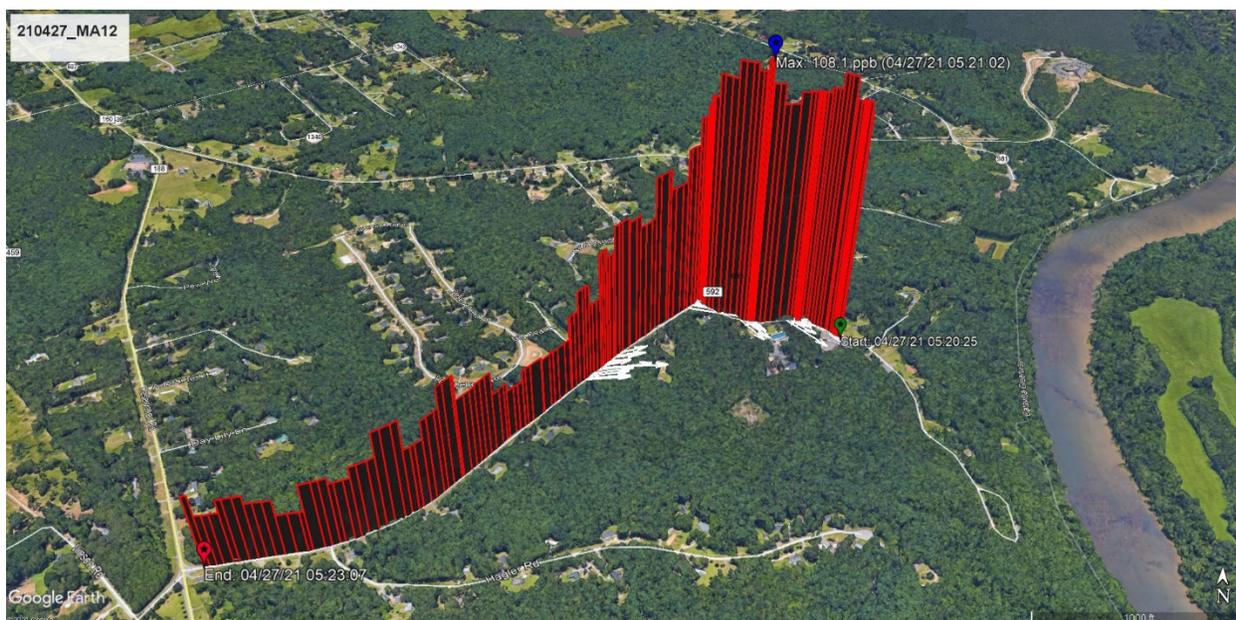


Figure 113: H₂S mobile transect ribbon – 210427_MA12 (Figure 112 -inset)

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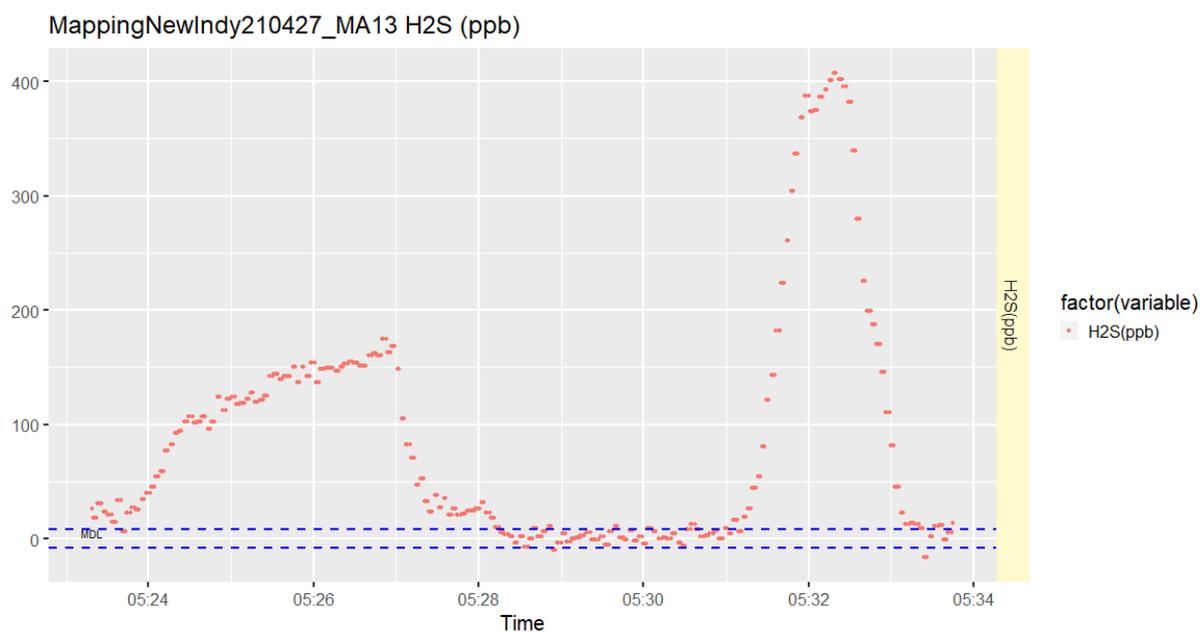


Figure 114: H₂S mobile transect timeseries – 210427MA13

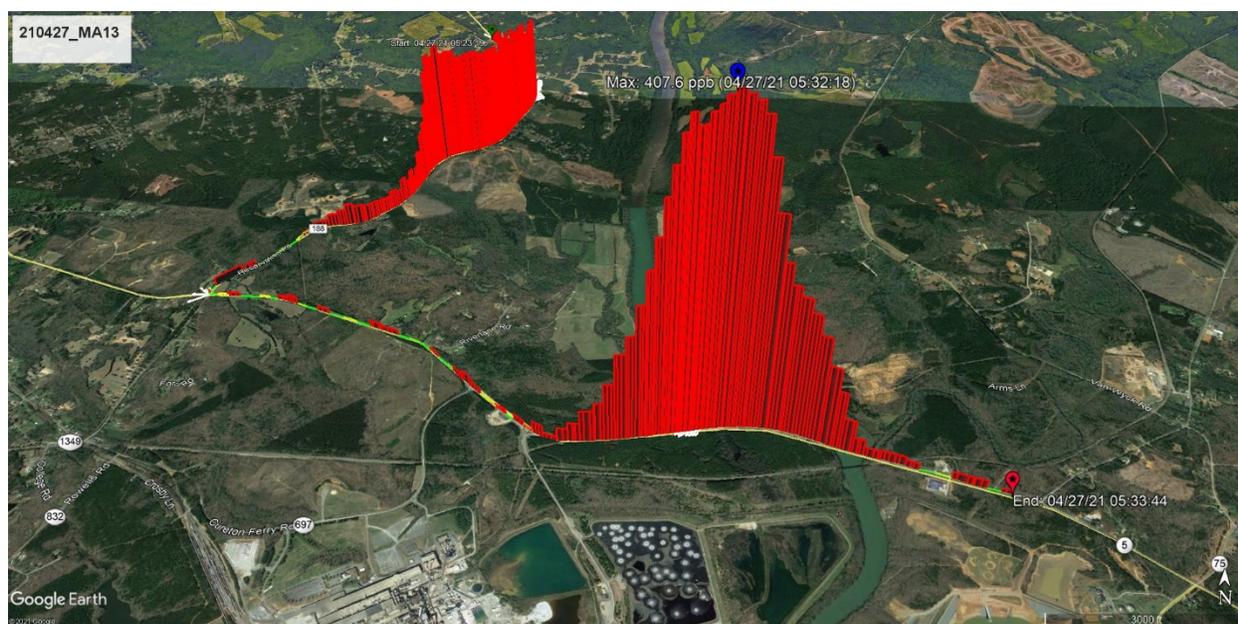


Figure 115: H₂S mobile transect ribbon – 210427_MA13

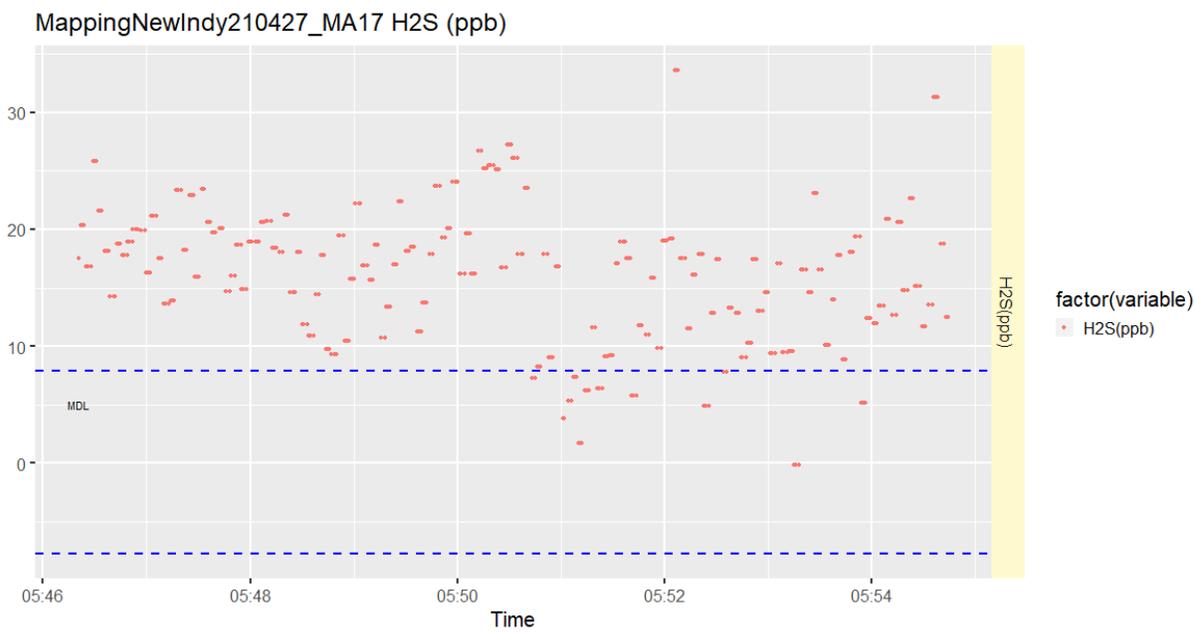


Figure 116: H₂S mobile transect timeseries – 210427MA17

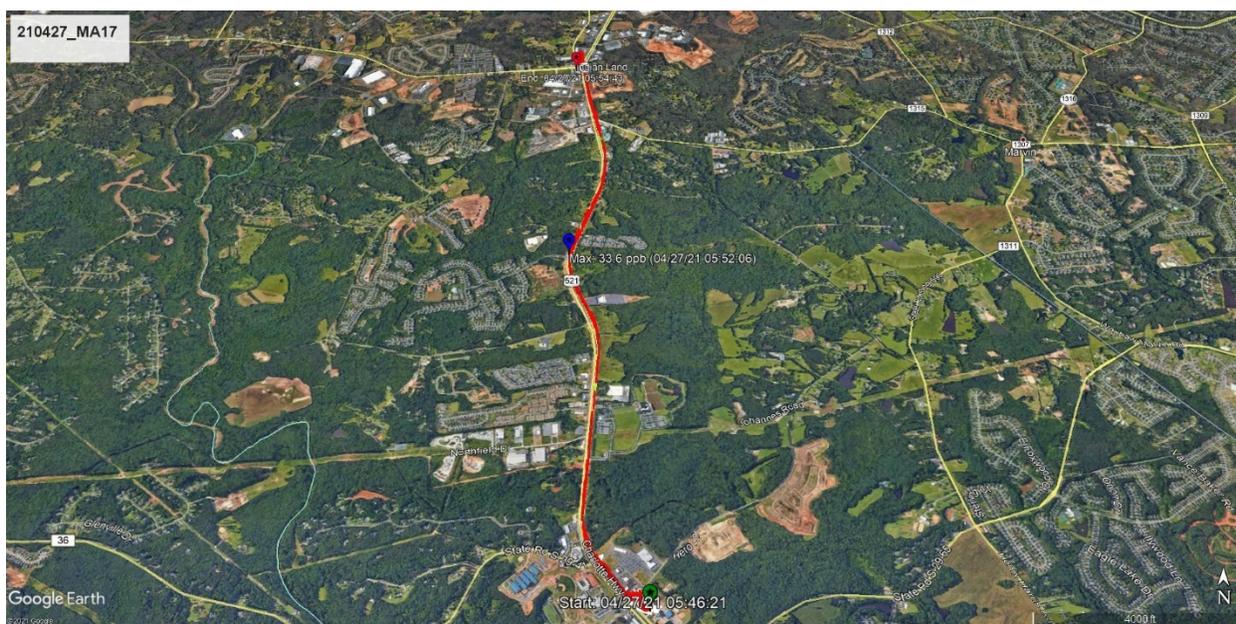


Figure 117: H₂S mobile transect ribbon – 210427_MA17

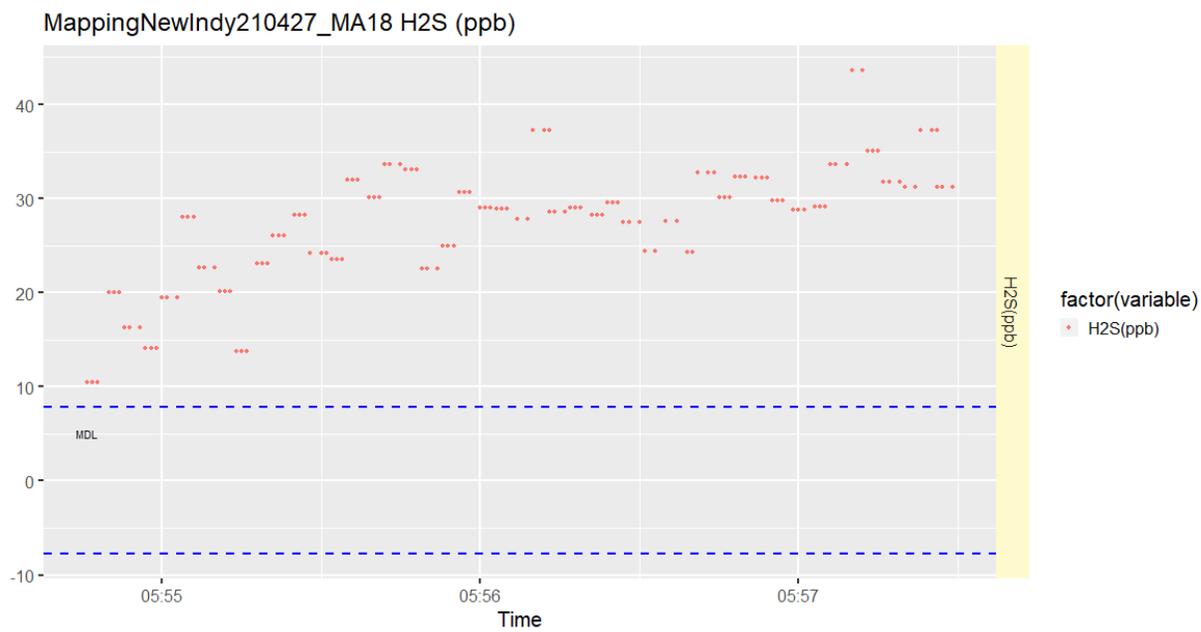


Figure 118: H₂S mobile transect timeseries – 210427MA18

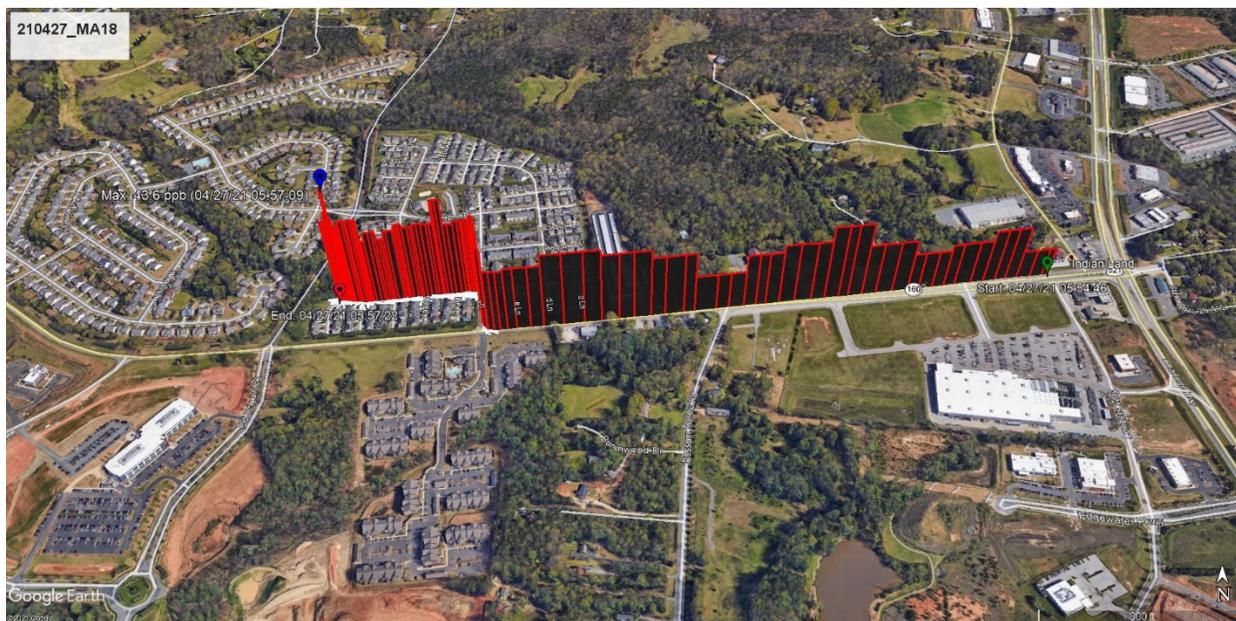


Figure 119: H₂S mobile transect ribbon – 210427_MA18

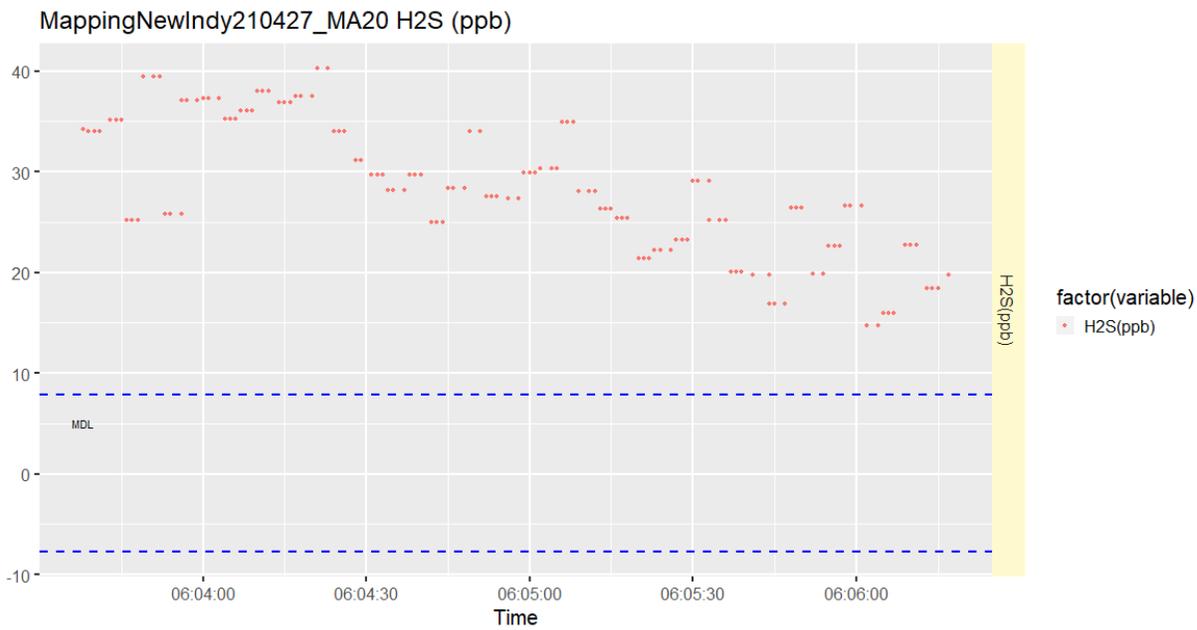


Figure 120: H₂S mobile transect timeseries – 210427MA20



Figure 121: H₂S mobile transect ribbon – 210427_MA20

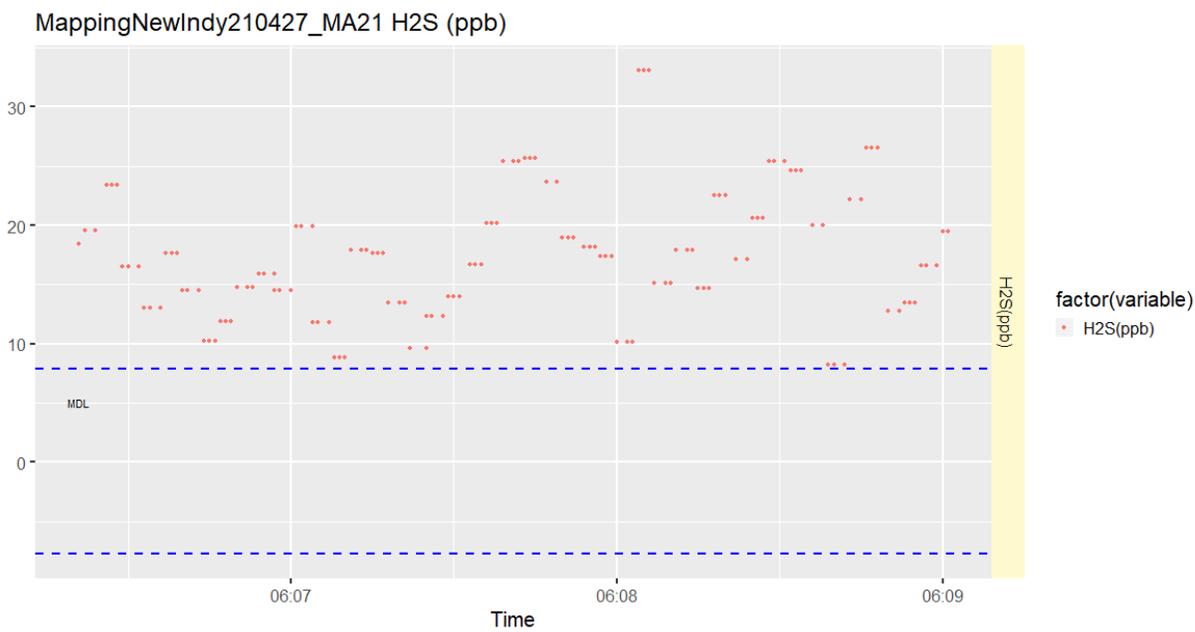


Figure 122: H₂S mobile transect timeseries – 210427MA21



Figure 123: H₂S mobile transect ribbon – 210427_MA21

Stationary GMAP measurements – April 27, 2021

STATIONARY MEASUREMENTS – APRIL 27, 2021	H₂S (PPB)		
ATSDR ACUTE (≤14 DAY) MRL	70		
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20		
ATSDR CHRONIC (≥365 DAYS) MRL	-		
GMAP MDL	7.86		
	max 1-sec conc	duration	avg H ₂ S (ppb)
*210427_ST01	501.82	30 min	315.19
*210427_ST02	140.56	30 min	120.75

Table 15: Maximum one-second concentrations from stationary measurements - April 27, 2021

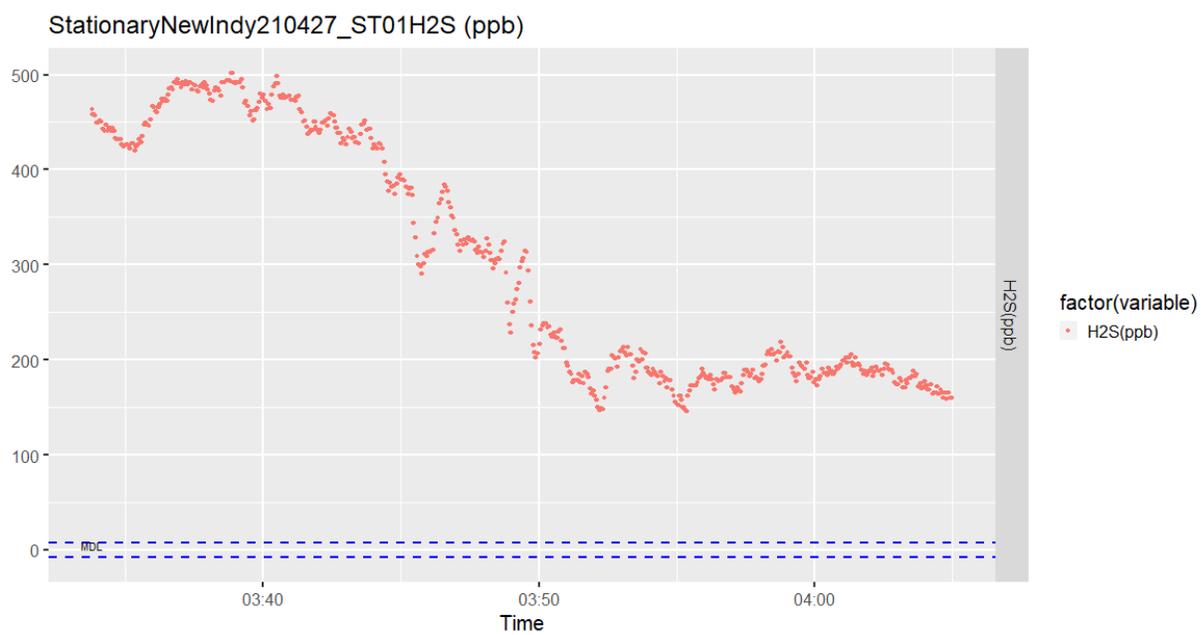


Figure 124: H₂S stationary timeseries north of New Indy– 210427_ST01

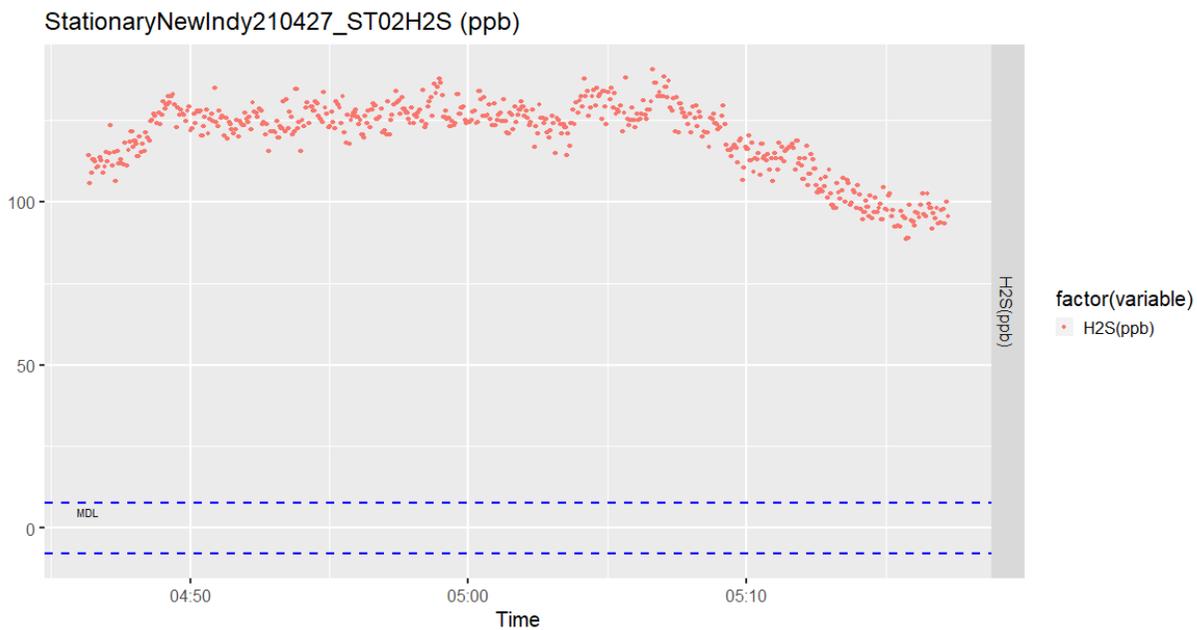


Figure 125: H₂S stationary timeseries at Iswa Headstart 1540 Tom Steven Road – 210427ST02

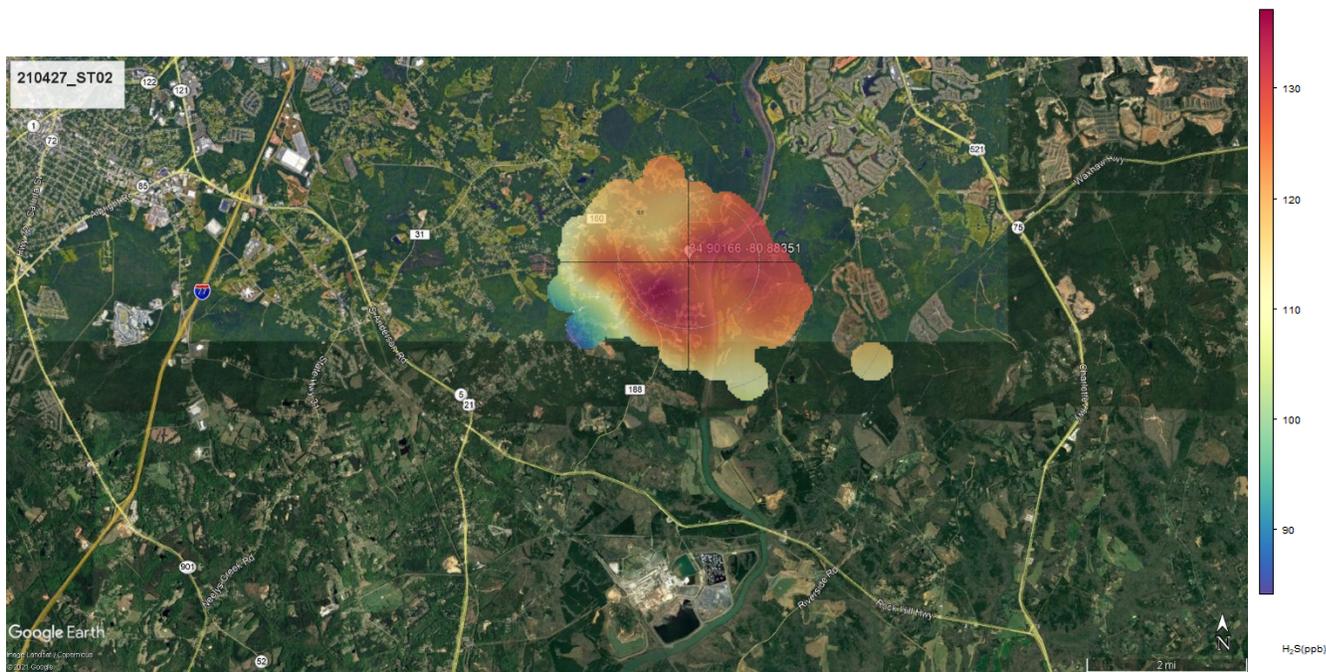


Figure 126: H₂S stationary Polar Plot at Iswa Headstart 1540 Tom Steven Road – 210427_ST02

Mobile GMAP measurements on-site at New Indy– April 27, 2021

MOBILE MEASUREMENTS – APRIL 27, 2021 ON-SITE	H₂S (PPB)
ATSDR ACUTE (≤14 DAY) MRL	70
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20
ATSDR CHRONIC (≥365 DAYS) MRL	-
GMAP MDL	7.86
210427_MA01	22.62
*210427_MA02	326.49
*210427_MA03	317.95
*210427_MA04	645.95
*210427_MA05	1015.50
*210427_MA06	2170.15
*210427_MA07	1705.82
*210427_MA08	1142.22
*210427_MA09	898.48
*210427_MA10	318.79
210427_MA11	12.86

Table 16: Maximum one-second concentrations from mobile measurements on-site New Indy - April 27, 2021

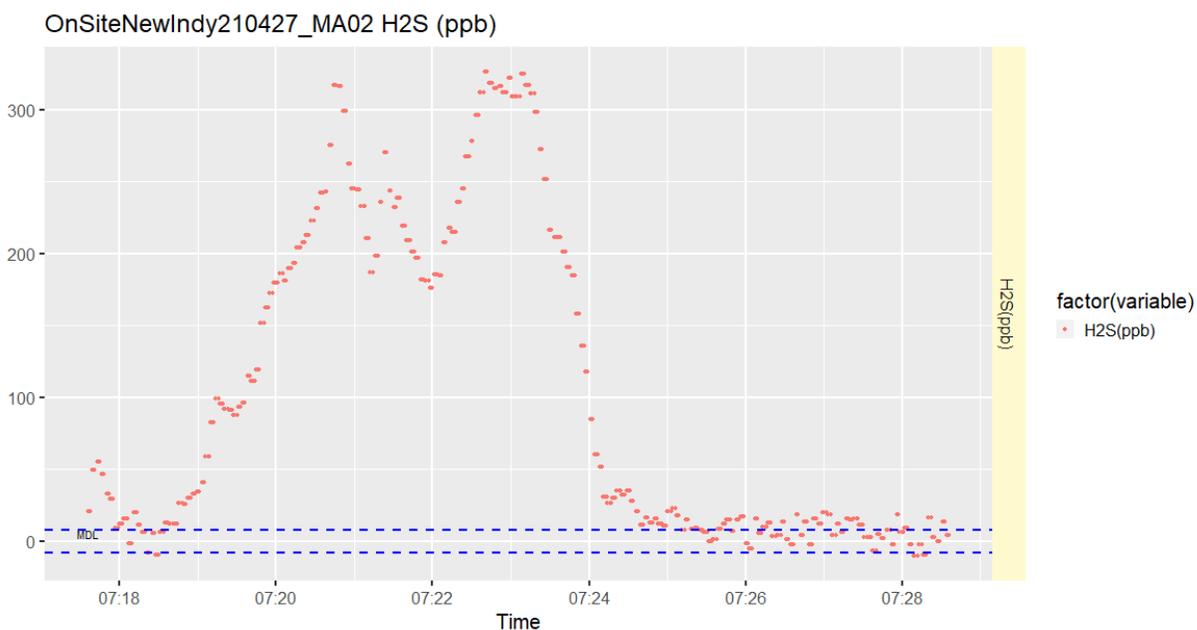


Figure 127: H₂S mobile transect timeseries on-site New Indy– 210427MA02

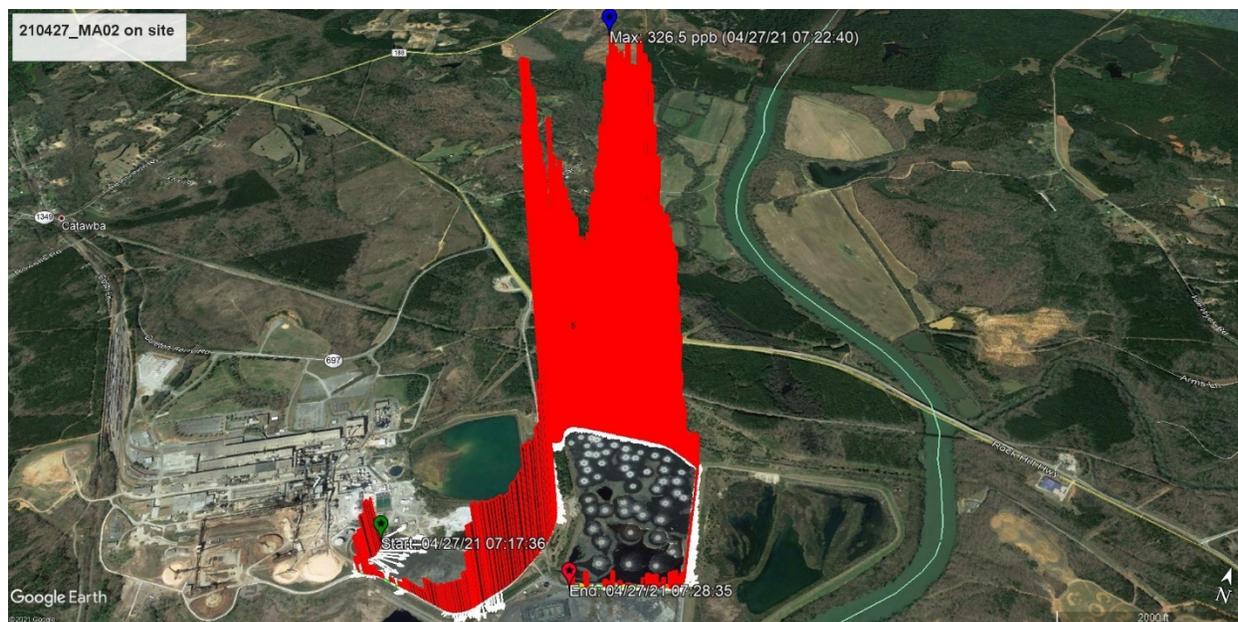


Figure 128: H₂S mobile transect ribbon on-site New Indy – 210427_MA02

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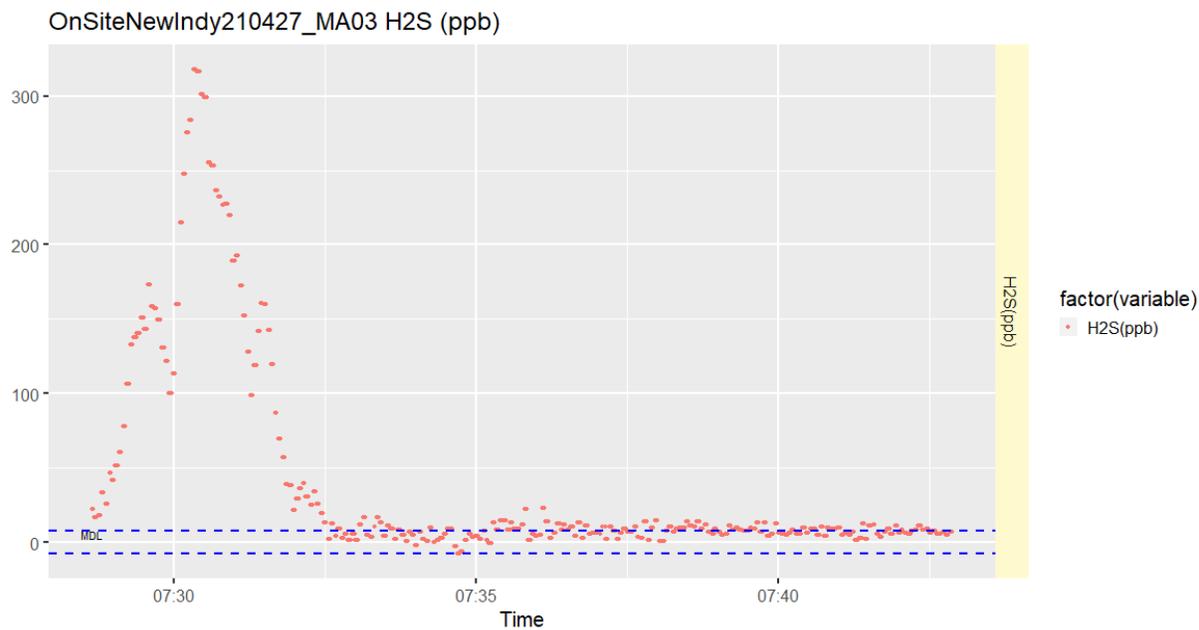


Figure 129: H₂S mobile transect timeseries on-site New Indy– 210427MA03



Figure 130: H₂S mobile transect ribbon on-site New Indy – 210427_MA03

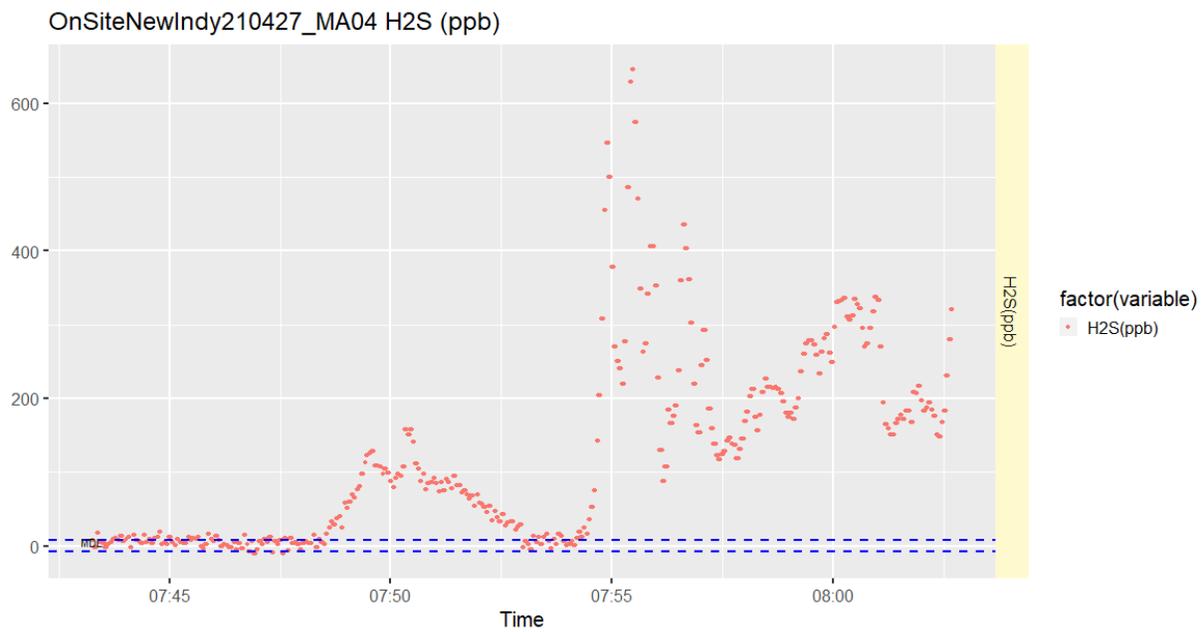


Figure 131: H₂S mobile transect timeseries on-site New Indy– 210427MA04

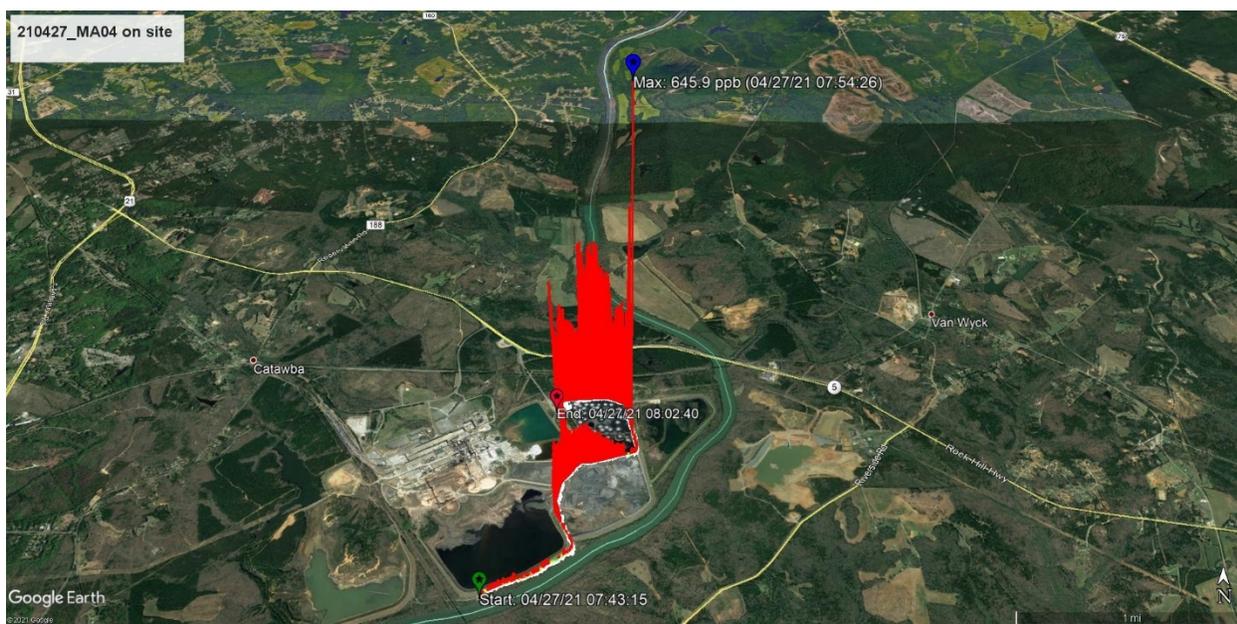


Figure 132: H₂S mobile transect ribbon on-site New Indy – 210427_MA04

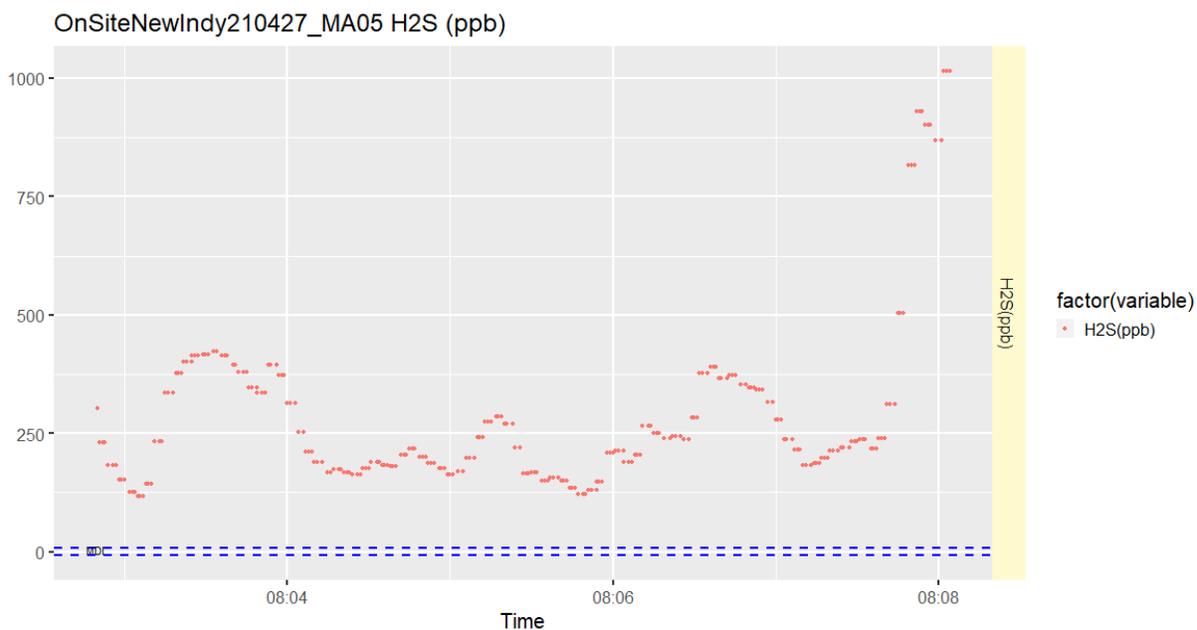


Figure 133: H₂S mobile transect timeseries on-site New Indy– 210427MA05

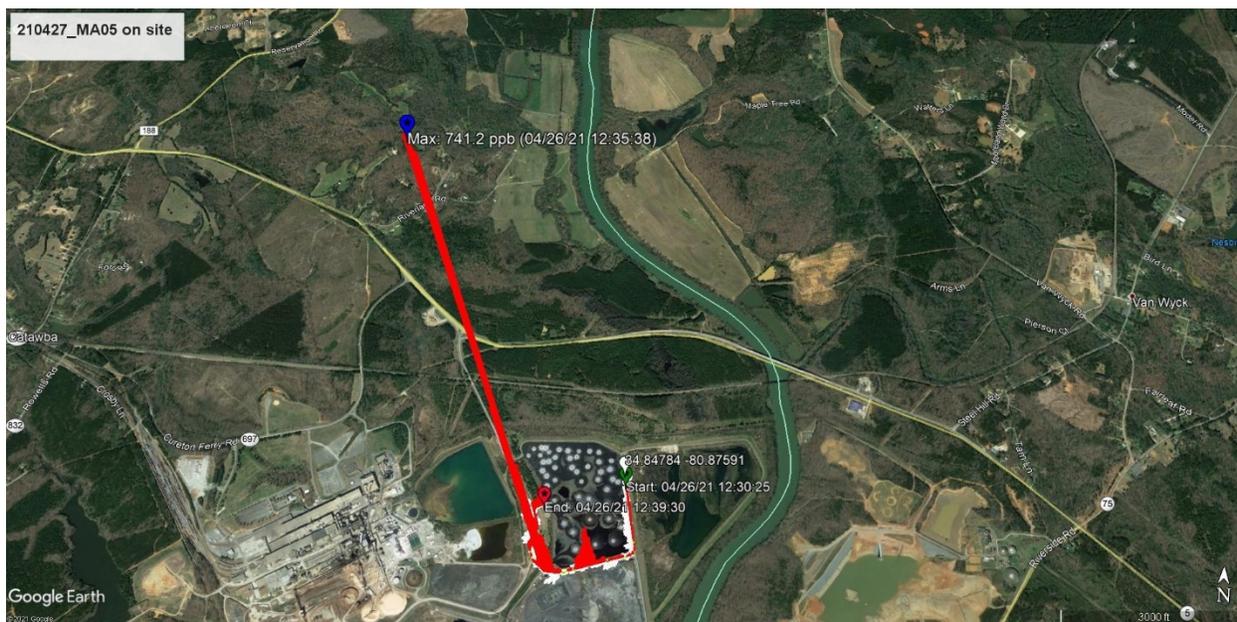


Figure 134: H₂S mobile transect ribbon on-site New Indy – 210427_MA05

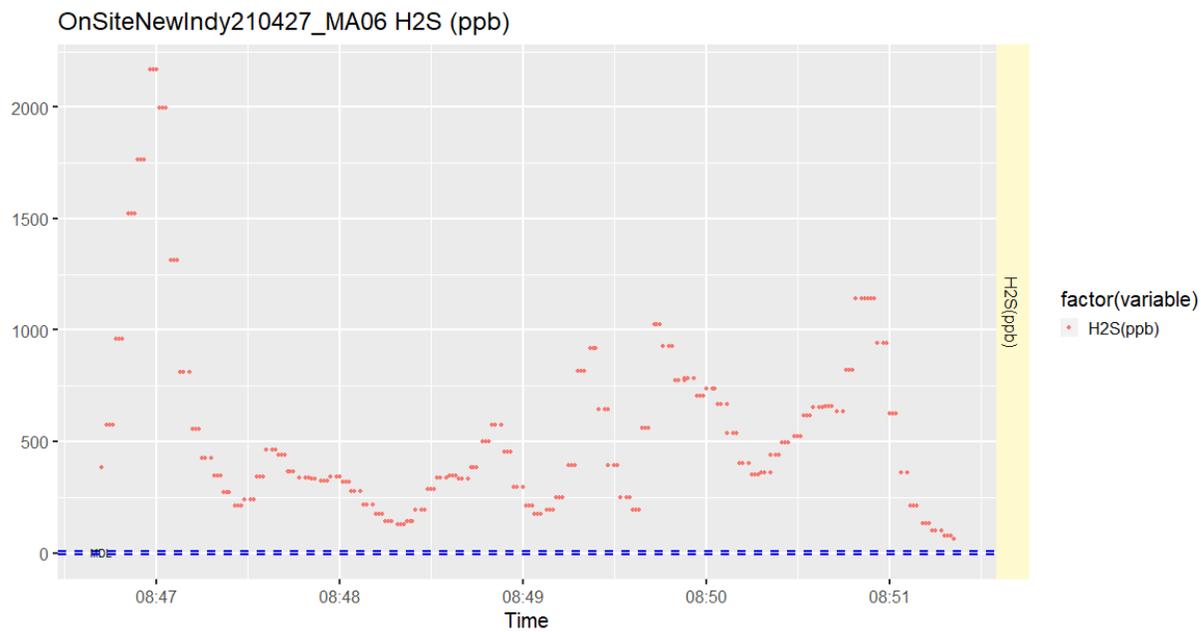


Figure 135: H₂S mobile transect timeseries on-site New Indy– 210427MA06



Figure 136: H₂S mobile transect ribbon on-site New Indy – 210427_MA06

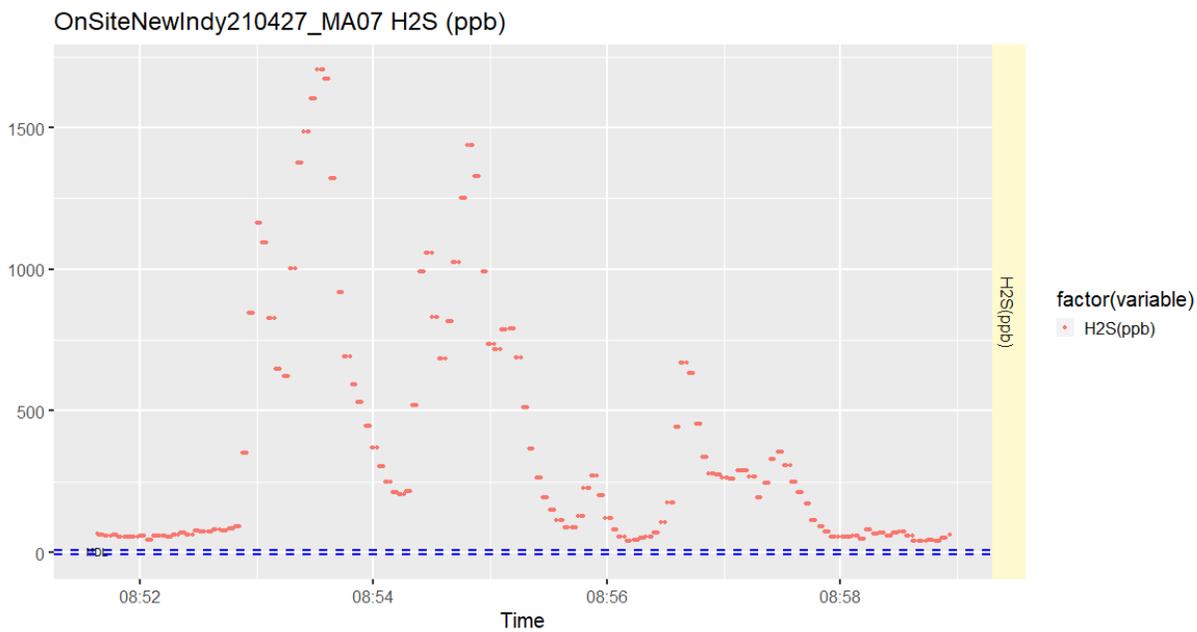


Figure 137: H₂S mobile transect timeseries on-site New Indy– 210427MA07

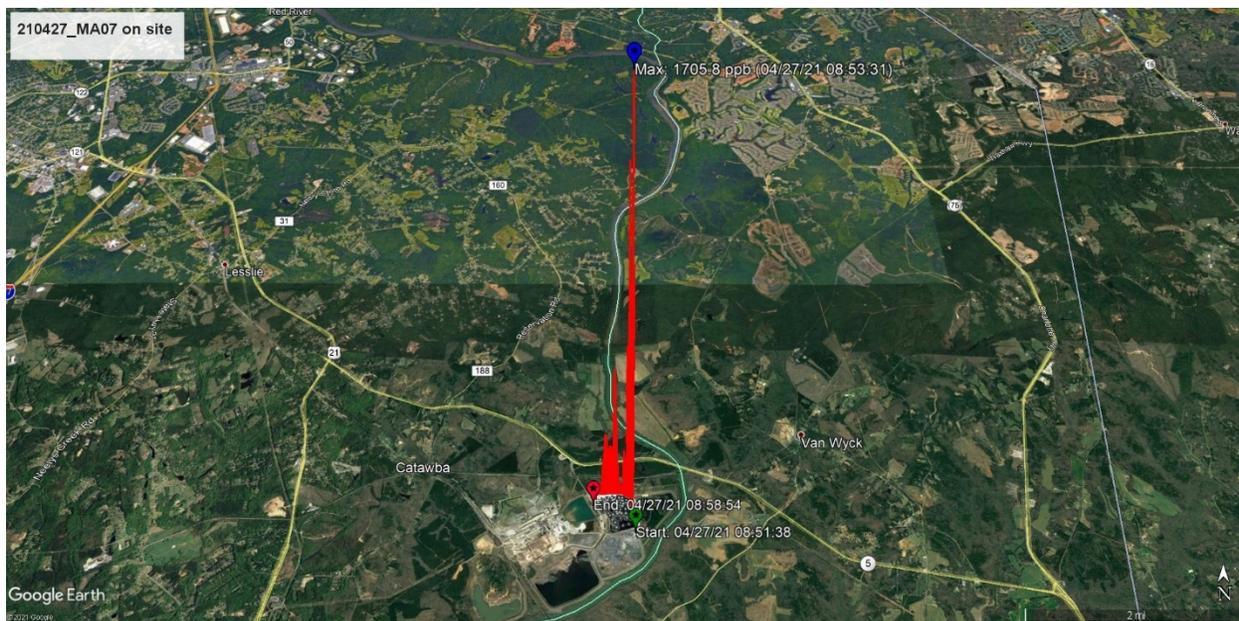


Figure 138: H₂S mobile transect ribbon on-site New Indy – 210427_MA07

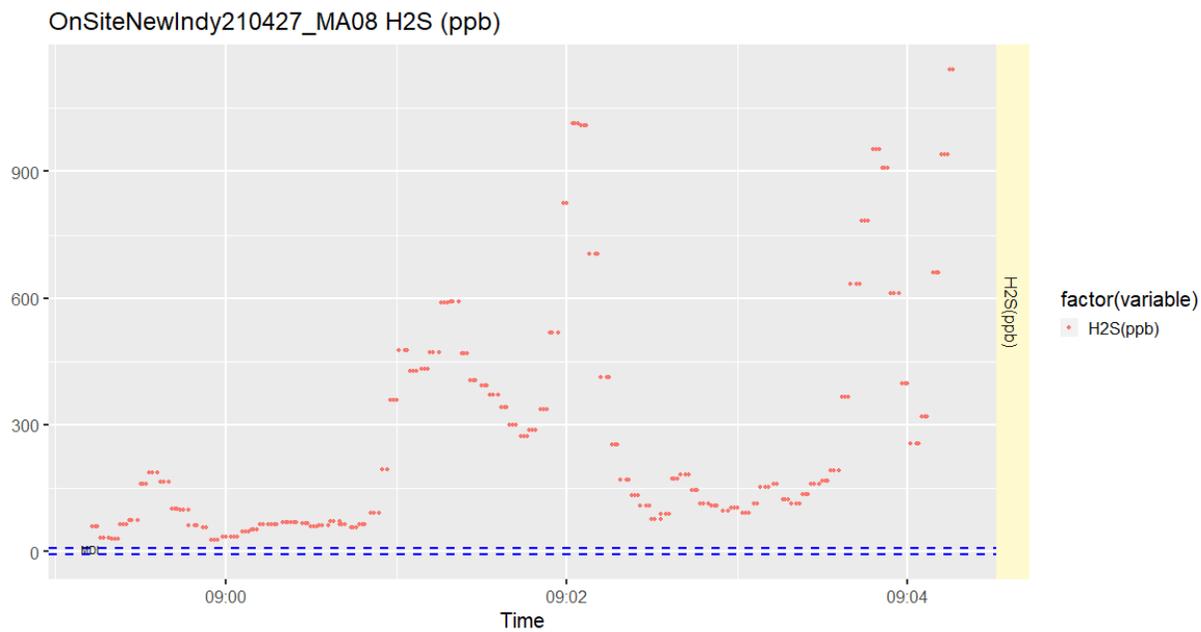


Figure 139: H₂S mobile transect timeseries on-site New Indy– 210427MA08

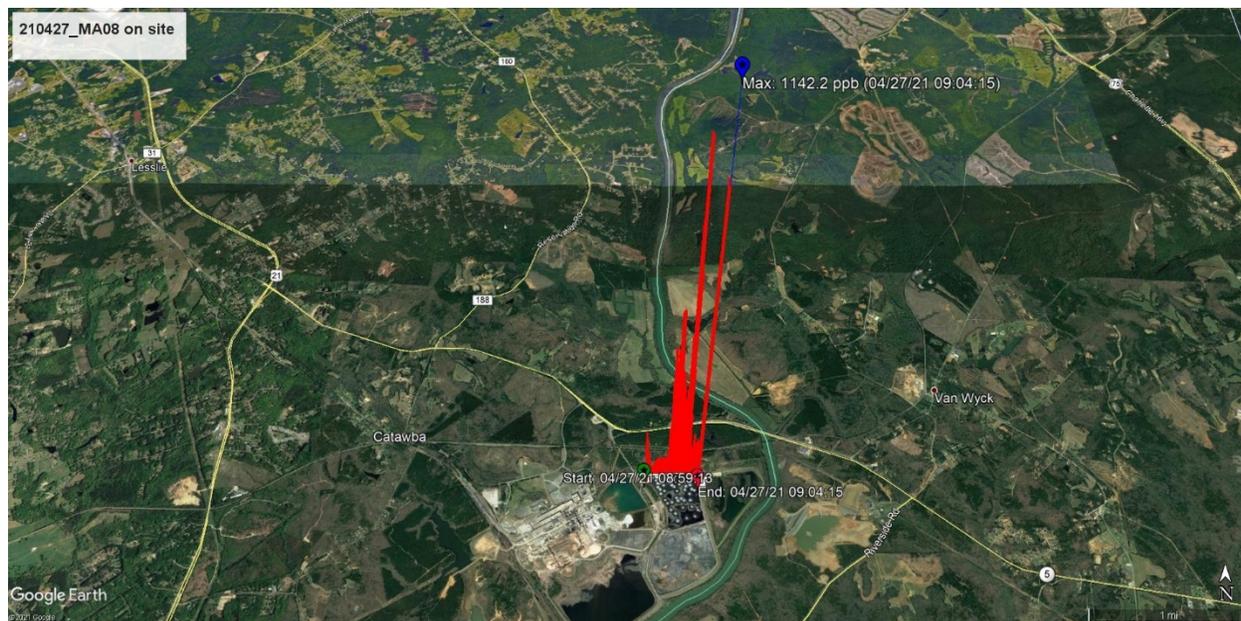


Figure 140: H₂S mobile transect ribbon on-site New Indy – 210427_MA08

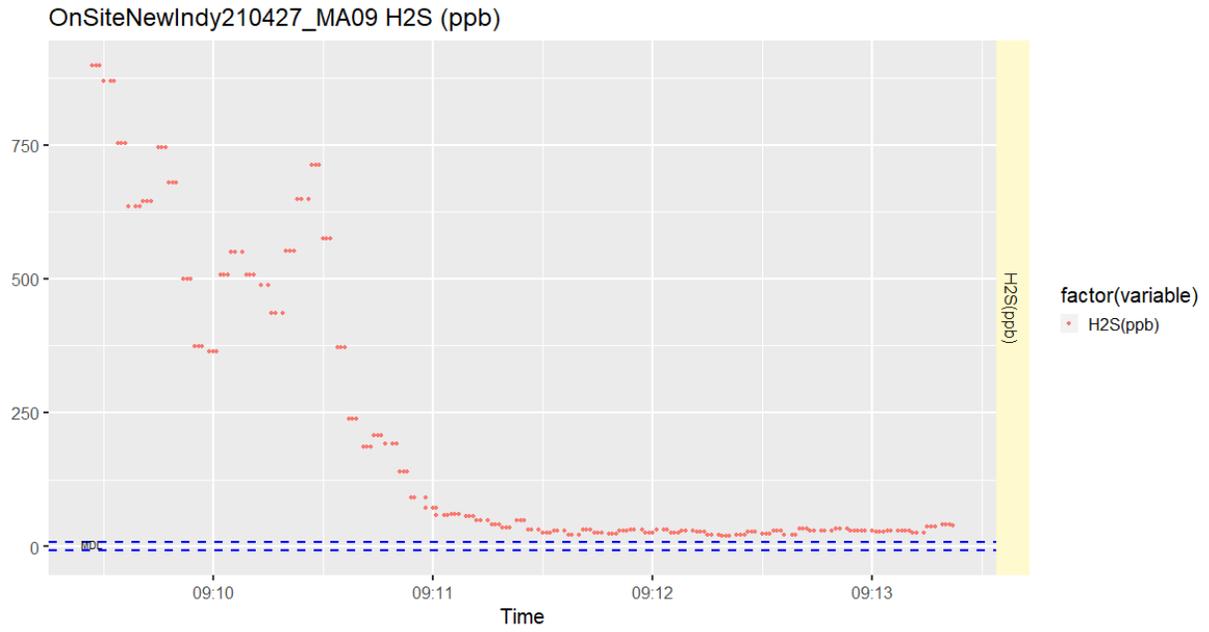


Figure 141: H₂S mobile transect timeseries on-site New Indy– 210427MA09

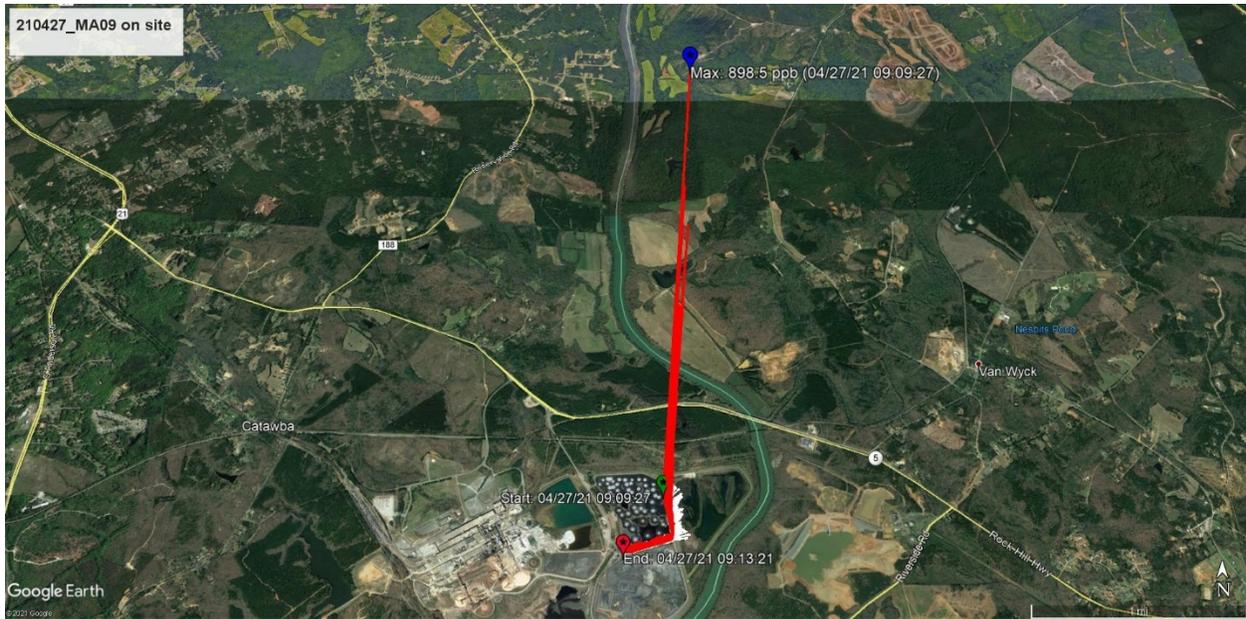


Figure 142: H₂S mobile transect ribbon on-site New Indy – 210427_MA09

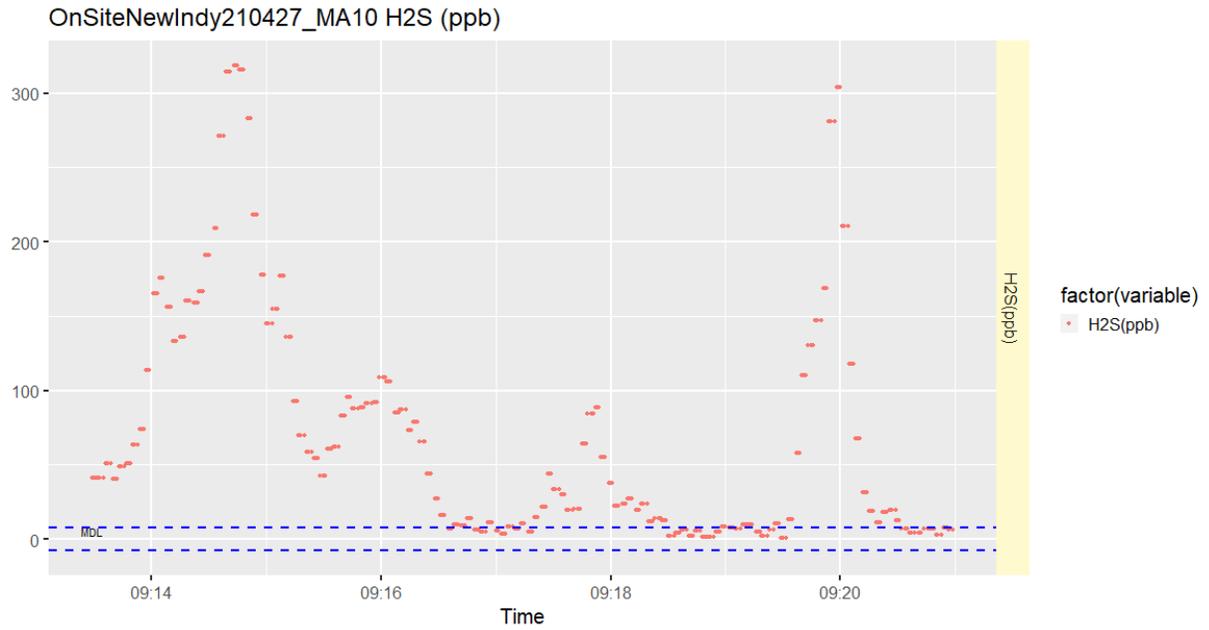


Figure 143: H₂S mobile transect timeseries on-site New Indy– 210427MA10

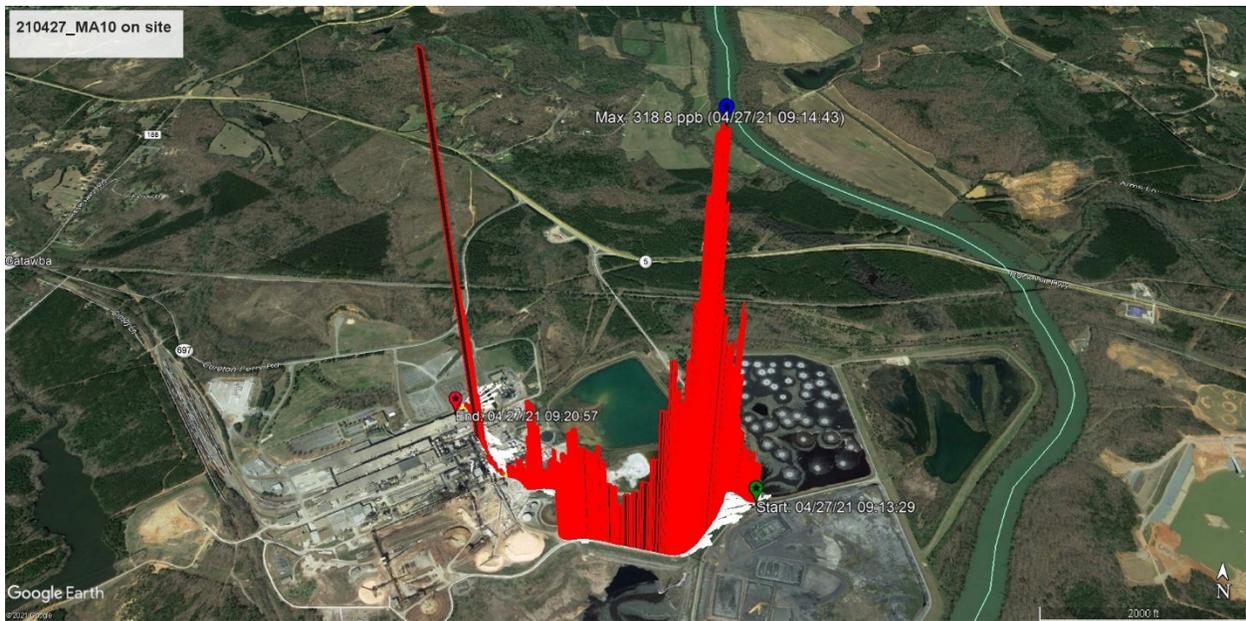


Figure 144: H₂S mobile transect ribbon on-site New Indy – 210427_MA10

Stationary GMAP measurements on-site of New Indy – April 27, 2021

STATIONARY MEASUREMENTS – APRIL 27, 2021 ON-SITE	H₂S (PPB)		
ATSDR ACUTE (≤14 DAY) MRL	70		
ATSDR INTERMEDIATE (15-364 DAYS) MRL	20		
ATSDR CHRONIC (≥365 DAYS) MRL	-		
GMAP MDL	7.86		
	max 1- sec conc	duration	avg H ₂ S (ppb)
*210427_ST01	3592.6	38 min	842.0
*210427_ST02	3155.78	5 min	975.8

Table 17: Maximum one-second concentrations from stationary measurements on-site New Indy - April 27, 2021

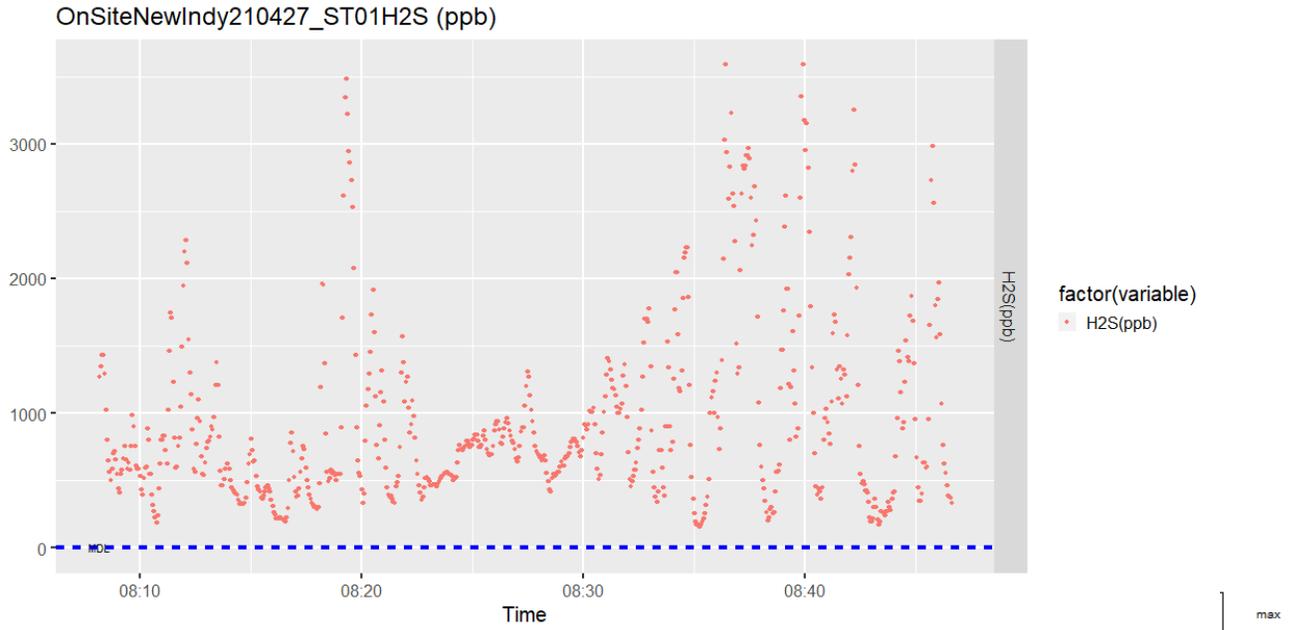


Figure 145: H₂S stationary timeseries on-site New Indy – 210427ST01

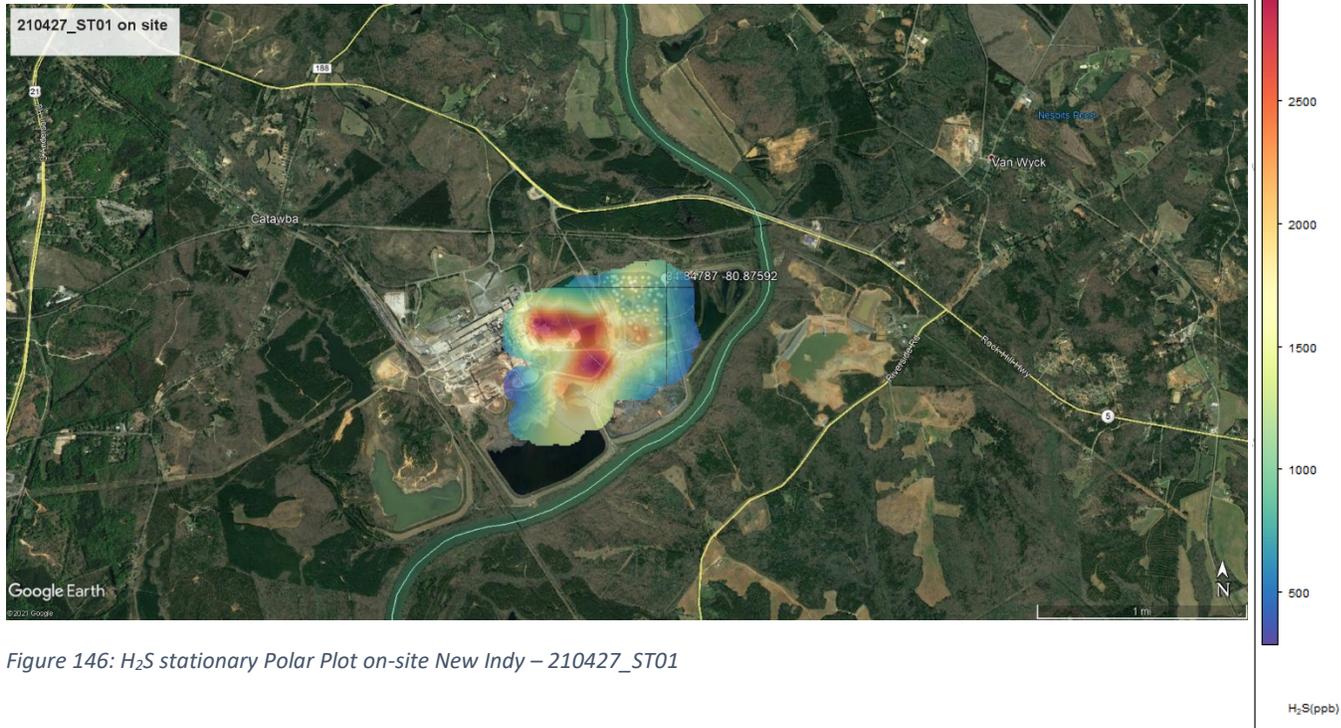


Figure 146: H₂S stationary Polar Plot on-site New Indy – 210427_ST01

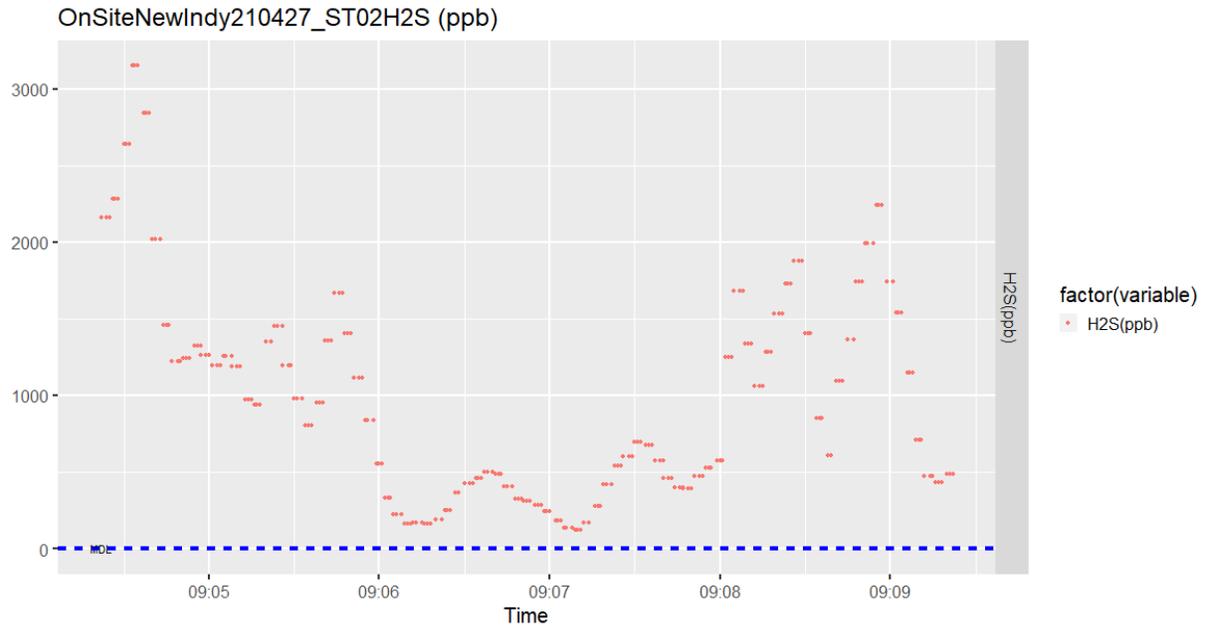


Figure 147: H₂S stationary timeseries on-site New Indy – 210427ST02



Figure 148: H₂S stationary Polar Plot on-site New Indy – 210427_ST02

APPENDIX I – H₂S QC CHECKS

H₂S QC CHECKS G2204			
04/19/21	13:52 CST	Mobile, AL	
Cylinder:	FF19845	50.69 PPM/1300 PSI	Cert date: 4/6/2020
Gas Dilution System:	ENV6100 SN3485		Cert date: 4/14/2021
Time (CST):	STD (PPM)	RDG (PPM)	% DIFF
13:52	Z	-0.0015	NA
14:11	2.0017	2.078	+3.87 %
14:16	1.00	1.046	+4.6 %
14:22	0.501	0.527	+5.2 %
14:31	0.250	0.262	+4.8 %
14:55	Z	0.002	NA
END: 14:55 CST			
04/22/21	14:09 CDT	Mobile, AL	
Cylinder:	FF19845	50.69 PPM/1300 PSI	Cert date: 4/6/2020
Gas Dilution System:	ENV6100 SN3485		Cert date: 4/14/2021
Time (CDT):	STD (PPM)	RDG (PPM)	% DIFF
14:22	Z	0.0005	NA
14:27	50.69	50.548	-0.3 %
14:43	1.997	2.117	6.0 %
14:49	1.000	1.065	6.5 %
14:56	0.501	0.533	6.4 %
15:01	0.250	0.272	8.8 %
END: 15:22 CDT			

H₂S QC CHECKS G2204

04/24/21			
	18:00 EDT	Catawba, SC	
Time check:	Phone: 6:42 PM	GMAP: 6:42 PM	Picarro: 6:42 PM (EDT)
Cylinder:	FF19845	50.69 PPM/1300 PSI	Cert date: 4/6/2020
Time:	STD (PPM)	RDG (PPM)	% DIFF
18:49	Z	0.001277	NA
18:53	50.69	50.49	-0.4%
18:55			END: 18:59 EDT
04/24/21			
	22:26 EDT	Catawba, SC	
Time check:	Phone: 10:27 PM	GMAP: 10:27 PM	Picarro: 10:27 PM (EDT)
Cylinder:	FF19845	50.69 PPM/	Cert date: 4/6/2020
Time:	STD (PPM)	RDG (PPM)	% DIFF
22:28	Z	0.0005	NA
22:32	50.69	50.55	-0.3%
			END: 22:34 EDT
04/25/21			
	21:50 EDT	Catawba, SC	
Time check:	Phone: 9:52 PM	GMAP: 9:52 PM	Picarro: 9:52 PM (EDT)
Cylinder:	FF19845	50.69 PPM/1300 PSI	Cert date: 4/6/2020
Time:	STD (PPM)	RDG (PPM)	% DIFF
21:53	Z	0.0017	NA
21:57	50.69	50.60	-0.2%
			END: 22:04 EDT
04/27/21			
	10:48 EDT	Catawba, SC	
Time check:	Phone: 10:48 AM	GMAP: 10:48 AM	Picarro: 10:48 AM (EDT)
Cylinder:	FF19845	50.69 PPM/1300 PSI	Cert date: 4/6/2020
Time:	STD (PPM)	RDG (PPM)	% DIFF
12:02	Z	0.00107	NA
12:07	50.69	50.51	-0.4%
			END: 12:19 EDT